



# Selection Guide

## 2020

Discrete and MOSFET components,  
analog & logic ICs

**nexperia**

EFFICIENCY WINS.



# MORE EXPERTISE



Bipolar transistors



Diodes



ESD protection, TVS, filtering and signal conditioning



MOSFETs



Analog & logic ICs

Every piece of electronics in the world can benefit from Nexperia efficiency. That's every design, from the simplest phone charger or light switch to the most complex hybrid automobile. Efficiency means we produce the world's most essential semiconductors, the finishing touches that empower electronic designs everywhere. That's all we do, **more or less.**



LESS COMPLEXITY



# Introduction

Welcome to the 2020 edition of the Nexperia Selection Guide. Here we present all our discrete and MOSFET components, and analog & logic ICs in one single document to give you a complete overview of our portfolio. We hope that makes it even easier for you to find the right product for your design.

Our extensive portfolio offers a wide range of general purpose devices and those that meet the stringent standards set by the automotive industry. They are housed in some of the most advanced, industry-leading small packages that combine power and thermal efficiency with best-in-class quality levels.

Alongside quality and efficiency, Nexperia customers value reliability and a consistent supply they can trust. We produce consistently reliable semiconductor components at high volume (Over 90 billion annually) and we work at every step to safeguard the long-term availability of our manufacturing processes and products, to ensure secure supply for all our customers.

We have a long history and broad experience. That ensures we can support you with the dedicated in-house technical support you need – from simplifying selection via quick-reference material to simple-to-use design tools and application insights. All to help drive up efficiency in your designs.

## All the functionality you need in one spot

Just like on our website, you will find the selection guide is split into our five key product areas. There is also a dedicated section on packages, highlighting the latest package innovations and packing options.

### Bipolar transistors

- › Resistor-equipped, low  $V_{CEsat}$  and small-signal transistors
- › Standard SMD, leadless and clip-bond packages

### Diodes

- › Broad choice of Zener, Schottky and switching diodes
- › Ultra-small, low-profile surface-mount package options

### ESD protection, filtering and signal conditioning

- › Extensive range of protection in ultra-small form factors
- › Optimized for signal integrity, robustness and system protection

### MOSFETs

- › Low  $R_{DSon}$  devices from < 20 V to > 200 V
- › True power packages with solid wireless-clip for smart efficiency

### Analog & logic ICs

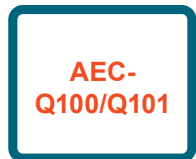
- › Comprehensive portfolio operating from 0.7 V to 15.0 V
- › Unrivalled package innovation and lowest power logic solutions

### Packages

- › The next generation of packaging for volume production
- › Package cross-reference and packing options

As an innovative company we are continually adding to our product portfolio, so to discover all our latest product information you should visit our website – [www.nexperia.com](http://www.nexperia.com)

# Our commitment: quality and reliability



## AEC-Q100/Q101 qualified

We qualify our products according to the automotive AEC-Q100/Q101 standard and even exceed its requirements, for instance when doing extended lifetime testing.



## Go for quality

All our processes and manufacturing plants are subject to regular international and internal audits, including the following:

- › ISO9001
- › IATF 16949 for automotive sites
- › ISO14001
- › OHSAS18001



## Design for excellence

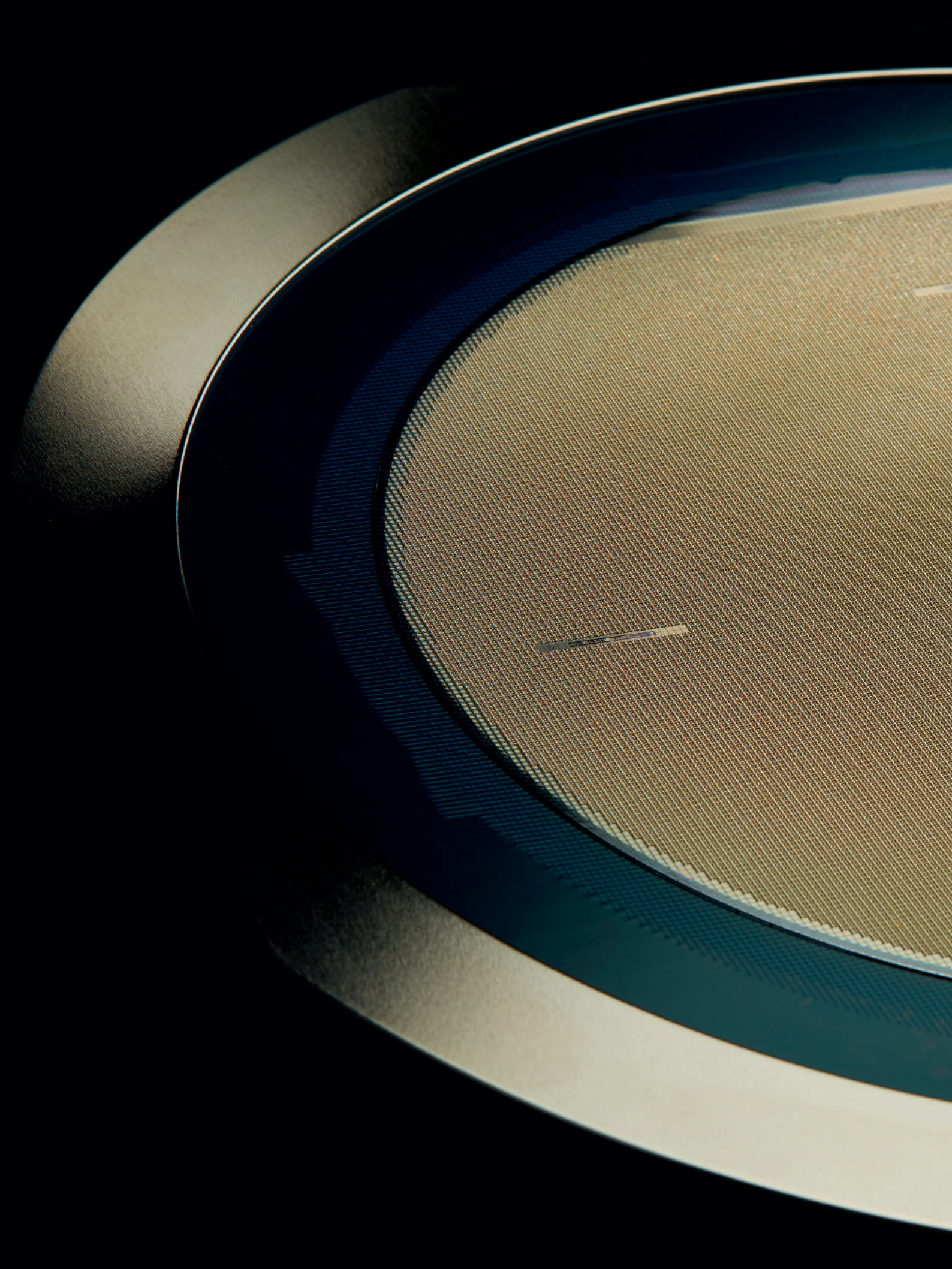
Nexperia's Design for Excellence (DfX) program ensures that each new development builds on past learning and that best practices are always employed. The result is continual product improvement.



## Zero defects

Zero defects is our standard through the organisation. A rigorous 8-discipline approach and thorough 5-why analysis ensure strong improvements are constantly made to our products and processes.

**Rigorous attention to detail and commitment to quality have yielded a very low product failure rate of a single-digit part per billion (ppb).**



# Selection guide 2020

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analog & logic ICs

Bipolar  
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## New products

As an innovative company we invest significantly in R&D, and continually expand our portfolio with the latest generation of technology and products. Here is a snapshot of our most recent releases, but don't forget to visit the website for the most up-to-date information - [www.nexperia.com](http://www.nexperia.com)

## Bipolar transistors

Category	Device	Description	Page
General purpose bipolar transistors	<b>BC816-16 / -25</b>	increased max voltage: 80 V, 500 mA NPN general-purpose transistors in SOT23	18
	<b>BC816-16W / -25W</b>	increased max voltage: 80 V, 500 mA NPN general-purpose transistors in SOT323	18
	<b>BC847AQB / BQB / CQB</b>	45 V, 100 mA NPN general-purpose transistors in DFN1110D-3 (SOT8015) with side-wettable flanks	18
	<b>BC847AQC / BQC / CQC</b>	45 V, 100 mA NPN general-purpose transistors in DFN1412D-3 (SOT8009) with side-wettable flanks	18
	<b>BC817-16QB/-25QB/-40QB</b>	45 V, 500 mA NPN general-purpose transistors in DFN1110D-3 (SOT8015) with side-wettable flanks	18
	<b>BC817-16QC/-25QC/-40QC</b>	45 V, 500 mA NPN general-purpose transistors in DFN1412D-3 (SOT8009) with side-wettable flanks	18
	<b>BC806-16 / -25</b>	Increased max voltage: 80 V, 500 mA PNP general-purpose transistors in SOT23	19
	<b>BC806-16W / -25W</b>	Increased max voltage: 80 V, 500 mA PNP general-purpose transistors in SOT323	19
	<b>BC857AQB / BQB / CQB</b>	45 V, 100 mA PNP general-purpose transistors in DFN1110D-3 (SOT8015) with side-wettable flanks	18
	<b>BC857AQC / BQC / CQC</b>	45 V, 100 mA PNP general-purpose transistors in DFN1412D-3 (SOT8009) with side-wettable flanks	18
	<b>BC807-16QB/-25QB/-40QB</b>	45 V, 500 mA PNP general-purpose transistors in DFN1110D-3 (SOT8015) with side-wettable flanks	18
	<b>BC817-16QC/-25QC/-40QC</b>	45 V, 500 mA PNP general-purpose transistors in DFN1412D-3 (SOT8009) with side-wettable flanks	18
	<b>BCP54T/-10T/-16T</b>	45 V, 1A NPN Power transistors in SOT223	21
	<b>BCX54T/-10T/-16T</b>	45 V, 1A NPN Power transistors in SOT89	21
	<b>BCP55T/-10T/-16T</b>	60 V, 1 A NPN Power transistors in SOT223	21
	<b>BCX55T/-10T/-16T</b>	60 V, 1 A NPN Power transistors in SOT89	21
	<b>BCP56T/-10T/-16T</b>	80 V, 1A NPN Power transistors in SOT223	21
	<b>BCX56T/-10T/-16T</b>	80 V, 1A NPN Power transistors in SOT89	21
	<b>BCP51T/-10T/-16T</b>	45 V, 1A PNP Power transistors in SOT223	21
	<b>BCX51T/-10T/-16T</b>	45 V, 1A PNP Power transistors in SOT89	21
	<b>BCP52T/-10T/-16T</b>	60 V, 1 A PNP Power transistors in SOT223	21
	<b>BCX52T/-10T/-16T</b>	60 V, 1 A PNP Power transistors in SOT89	21
	<b>BCP53T/-10T/-16T</b>	80 V, 1A PNP Power transistors in SOT223	21
	<b>BCX53T/-10T/-16T</b>	80 V, 1A PNP Power transistors in SOT89	21
Power bipolar transistors	<b>MJD44H11</b>	80 V , 8A NPN Power bipolar transistor in DPAK	22
	<b>MJD45H11</b>	80 V , 8A PNP Power bipolar transistor in DPAK	22
	<b>MJD44H11A</b>	80 V , 8A NPN Automotive power bipolar transistor in DPAK	22
	<b>MJD45H11A</b>	80 V , 8A PNP Automotive power bipolar transistor in DPAK	22
	<b>MJD31C</b>	100 V, 3A NPN Power bipolar transistor in DPAK	22
	<b>MJD32C</b>	100 V, 3A PNP Power bipolar transistor in DPAK	22
	<b>MJD31CA</b>	100 V, 3A NPN Automotive power bipolar transistor in DPAK	22
	<b>MJD32CA</b>	100 V, 3A PNP Automotive power bipolar transistor in DPAK	22

## Diodes

Category	Device	Description	Page
Switching diodes	<b>BAS16QB</b>	High-speed switching diode in DFN1110D-3 (SOT8015) with side-wettable flanks (SWF)	47
	<b>BAS16QC</b>	High-speed switching diode in DFN1412D-3 (SOT8009) with side-wettable flanks (SWF)	47
Recovery rectifiers	<b>PNE20060CPE</b>	200 V, 2x3A dual common cathode hyperfast recovery rectifier in CFP15B	50
	<b>PNE20080CPE</b>	200 V, 2x4A dual common cathode hyperfast recovery rectifier in CFP15B	50
	<b>PNE200100CPE</b>	200 V, 2x5A dual common cathode hyperfast recovery rectifier in CFP15B	50
Power SiGe rectifiers	<b>PMEG120G10ELR</b>	120 V, 1 A SiGe Rectifier in CFP3	51
	<b>PMEG120G20ELR</b>	120 V, 2 A SiGe Rectifier in CFP3	51
	<b>PMEG120G20ELP</b>	120 V, 2 A SiGe Rectifier in CFP5	51
	<b>PMEG120G30ELP</b>	120 V, 3 A SiGe Rectifier in CFP5	51
	<b>PMEG150G20ELP</b>	150 V, 2 A SiGe Rectifier in CFP5	51
	<b>PMEG150G30ELP</b>	150 V, 3 A SiGe Rectifier in CFP5	51
	<b>PMEG200G20ELP</b>	200 V, 2 A SiGe Rectifier in CFP5	51
	<b>PMEG200G30ELP</b>	200 V, 3 A SiGe Rectifier in CFP5	51
	<b>PMEG150G10ELR</b>	150 V, 1 A SiGe Rectifier in CFP3	51
	<b>PMEG150G20ELR</b>	150 V, 2 A SiGe Rectifier in CFP3	51
	<b>PMEG200G10ELR</b>	200 V, 1 A SiGe Rectifier in CFP3	51
	<b>PMEG200G20ELR</b>	200 V, 2 A SiGe Rectifier in CFP3	51
Schottky diodes and rectifiers	<b>PMEG060T030ELPE</b>	60 V, 3 A Trench Schottky Rectifier in CFP15B	56
	<b>PMEG060T050ELPE</b>	60 V, 5 A Trench Schottky Rectifier in CFP15B	56
	<b>PMEG060T060CLPE</b>	60 V, 2x3A dual common cathode low leakage current Trench MEGA Schottky barrier rectifier in CFP15B	56
	<b>PMEG060T080CLPE</b>	60 V, 2x4A dual common cathode low leakage current Trench MEGA Schottky barrier rectifier in CFP15B	56
	<b>PMEG060T100CLPE</b>	60 V, 2x5A dual common cathode low leakage current Trench MEGA Schottky barrier rectifier in CFP15B	56

## ESD protection, TVS, filtering and signal conditioning

Category	Device	Description	Page
ESD Protection	<b>PESD2V8R1BSF</b>	ESD protection for USB4 SuperSpeed data lines	67
	<b>PESD5V0H1BSN</b>	ESD protection for USB3 and HDMI2 data lines in DSN0402 package	67
	<b>PESD5V5V1BCSN</b>	Super small 5V ESD protection in DSN0402 package	70
	<b>PESD24VV2BT</b>	High VRWM Bidirectional ESD protection	72
	<b>PESD27VV2BT</b>	High VRWM Bidirectional ESD protection	72
	<b>PESD24VV1BA</b>	High VRWM Bidirectional ESD protection	70
	<b>PESD27VV1BA</b>	High VRWM Bidirectional ESD protection	70
	<b>PESD12VA-SF</b>	ESD protection for 12V interface lines	70
	<b>PESD3V3L4BHC</b>	4 fold ESD protection array with lower trigger voltage	72
	<b>PESD32VL1BA</b>	Bidirectional single line ESD protection with 32V working voltage in SOD323 package	70
	<b>PESD36VL1BA</b>	Bidirectional single line ESD protection with 36V working voltage in SOD323 package	70
	<b>PUSB3BB2DF</b>	2-line ESD Protection in DFN0603-3 package with extremely low clamping & low capacitance	68
Transient Voltage Surge Suppressor (TVS)	<b>PTVS3V3Z1BSC</b>	Surge protection for 3.3V supply, battery, audio lines	74
	<b>PTVS5V0Z1BSC</b>	Surge protection 5V for supply, battery, audio lines	74

## MOSFETs

Category	Device	Description	Page
Automotive MOSFETs	<b>BUK750R7-40H</b>	N-channel 40 V, 0.7 mΩ standard level Q101 qualified MOSFET in LFPAK88	79
	<b>BUK750R9-40H</b>	N-channel 40 V, 0.9 mΩ standard level Q101 qualified MOSFET in LFPAK88	79
	<b>BUK751R0-40H</b>	N-channel 40 V, 1.0 mΩ standard level Q101 qualified MOSFET in LFPAK88	79
	<b>BUK751R5-40H</b>	N-channel 40 V, 1.5 mΩ, standard level Q101 qualified MOSFET in LFPAK88	79
	<b>BUK7M3R3-40H</b>	N-channel 40 V, 3.3 mΩ standard level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK9M3R3-40H</b>	N-channel 40 V, 3.3 mΩ logic level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK7M4R3-40H</b>	N-channel 40 V, 4.3 mΩ standard level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK9M4R3-40H</b>	N-channel 40 V, 4.3 mΩ logic level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK7M5R0-40H</b>	N-channel 40 V, 5.0 mΩ standard level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK9M5R0-40H</b>	N-channel 40 V, 5.0 mΩ logic level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK7M6R0-40H</b>	N-channel 40 V, 6.0 mΩ standard level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK9M6R0-40H</b>	N-channel 40 V, 6.0 mΩ logic level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK7M6R7-40H</b>	N-channel 40 V, 6.7 mΩ standard level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK9M6R7-40H</b>	N-channel 40 V, 6.7 mΩ logic level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK7M8R5-40H</b>	N-channel 40 V, 8.5 mΩ standard level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK9M8R5-40H</b>	N-channel 40 V, 8.5 mΩ logic level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK7M9R5-40H</b>	N-channel 40 V, 9.5 mΩ standard level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK9M9R5-40H</b>	N-channel 40 V, 9.5 mΩ logic level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK7M11-40H</b>	N-channel 40 V, 11.0 mΩ standard level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK9M11-40H</b>	N-channel 40 V, 11.0 mΩ logic level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK7M15-40H</b>	N-channel 40 V, 15.0 mΩ standard level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK9M15-40H</b>	N-channel 40 V, 15.0 mΩ logic level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK7M20-40H</b>	N-channel 40 V, 20.0 mΩ standard level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK9M20-40H</b>	N-channel 40 V, 20.0 mΩ logic level Q101 qualified MOSFET in LFPAK33	80
	<b>BUK6Y19-30P</b>	P-Channel 30 V, 19.0 mΩ intermediate level Q101 qualified MOSFET in LFPAK56	85
	<b>BUK6Y14-40P</b>	P-Channel 40 V, 14.5 mΩ intermediate level Q101 qualified MOSFET in LFPAK56	85
	<b>BUK6Y33-60P</b>	P-Channel 60 V, 33.0 mΩ intermediate level Q101 qualified MOSFET in LFPAK56	85
	<b>BUK6Y61-60P</b>	P-Channel 60 V, 61.0 mΩ intermediate level Q101 qualified MOSFET in LFPAK56	85
	<b>PMN48XPA</b>	P-Channel 20 V, 55 mΩ Q101 qualified Small Signal MOSFET in SOT457	87
	<b>PMV15SUNEA</b>	N-Channel 20 V, 19 mΩ Q101 qualified Small Signal MOSFET in SOT23	87
	<b>PMV65SUNEA</b>	N-Channel 20 V, 73 mΩ Q101 qualified Small Signal MOSFET in SOT23	87
	<b>PMV19XNEA</b>	N-Channel 30 V, 24 mΩ Q101 qualified Small Signal MOSFET in SOT23	87
	<b>BUK6D22-30E</b>	N-Channel 30 V, 22 mΩ Q101 qualified Small Signal MOSFET in DFN2020MD-6	87
	<b>BUK6D38-30E</b>	N-Channel 30 V, 18 mΩ Q101 qualified Small Signal MOSFET in DFN2020MD-6	87
<b>BUK6D72-30E</b>	N-Channel 30 V, 72 mΩ Q101 qualified Small Signal MOSFET in DFN2020MD-6	87	
<b>BUK6D30-40E</b>	N-Channel 40 V, 23 mΩ Q101 qualified Small Signal MOSFET in DFN2020MD-6	87	
<b>BUK6D56-60E</b>	N-Channel 60 V, 56 mΩ Q101 qualified Small Signal MOSFET in DFN2020MD-6	87	
<b>BUK6D210-60E</b>	N-Channel 60 V, 210 mΩ Q101 qualified Small Signal MOSFET in DFN2020MD-6	87	
Power MOSFETs	<b>PSMNR58-30YLH</b>	N-channel 30 V, 0.67 mΩ, logic level MOSFET in LFPAK56E	90
	<b>PSMNR51-25YLH</b>	N-channel 25 V, 0.57 mΩ, logic level MOSFET in LFPAK56E	90
	<b>PSMNR60-25YLH</b>	N-channel 25 V, 0.7 mΩ, logic level MOSFET in LFPAK56	90
	<b>PSMNR70-30YLH</b>	N-channel 30 V, 0.82 mΩ, logic level MOSFET in LFPAK56	91

## MOSFETs

Category	Device	Description	Page
Power MOSFETs	<b>PSMN1R5-25MLH</b>	N-channel 25 V, 1.81 mΩ, logic level MOSFET in LFPAK33	92
	<b>PSMN1R6-30MLH</b>	N-channel 30 V, 1.9 mΩ, 160 A logic level MOSFET in LFPAK33	92
	<b>PSMN1R8-30MLH</b>	N-channel 30 V, 2.1 mΩ, 150 A logic level MOSFET in LFPAK33	92
	<b>PSMNR70-40SSH</b>	N-channel 40 V, 0.7 mΩ, standard level MOSFET in LFPAK88	92
	<b>PSMNR90-40SSH</b>	N-channel 40 V, 0.9 mΩ, standard level MOSFET in LFPAK88	92
	<b>PSMN1R0-40SSH</b>	N-channel 40 V, 1 mΩ, standard level MOSFET in LFPAK88	92
	<b>PSMNR90-40YLH</b>	N-channel 40 V, 0.94 mΩ, logic level MOSFET in LFPAK56E	93
	<b>PSMN1R0-40YSH</b>	N-channel 40 V, 1 mΩ, standard level MOSFET in LFPAK56E	93
	<b>PSMN1R5-40YSD</b>	N-channel 40 V, 1.5 mΩ, standard level MOSFET in LFPAK56	93
	<b>PSMN1R7-40YLD</b>	N-channel 40 V, 1.8 mΩ, logic level MOSFET in LFPAK56	93
	<b>PSMN1R9-40YSD</b>	N-channel 40 V, 1.9 mΩ, standard level MOSFET in LFPAK56	93
	<b>PSMN2R0-40YLD</b>	N-channel 40 V, 2.1 mΩ, logic level MOSFET in LFPAK56	93
	<b>PSMN2R2-40YSD</b>	N-channel 40 V, 2.2 mΩ, standard level MOSFET in LFPAK56	93
	<b>PSMN2R5-40YLD</b>	N-channel 40 V, 2.6 mΩ, logic level MOSFET in LFPAK56	93
	<b>PSMN2R8-40YSD</b>	N-channel 40 V, 2.8 mΩ, standard level MOSFET in LFPAK56	93
	<b>PSMN3R2-40YLD</b>	N-channel 40 V, 3.3 mΩ, logic level MOSFET in LFPAK56	93
	<b>PSMN3R5-40YSD</b>	N-channel 40 V, 3.5 mΩ, standard level MOSFET in LFPAK56	93
	<b>PSMN6R7-40MSD</b>	N-channel 40 V, 6.7 mΩ standard level MOSFET in LFPAK33	93
	<b>PSMN011-100YSF</b>	N-channel 100 V, 10.9 mΩ, standard level MOSFET in LFPAK56	96
Small-signal MOSFETs	<b>PMH600UNE</b>	N-channel 20 V, 620 mΩ, Small signal MOSFET in DFN0606-3	98
	<b>PMH550UNE</b>	N-channel 30 V, 670 mΩ, Small signal MOSFET in DFN0606-3	98
	<b>NX7002BKH</b>	N-channel 60 V, 2800 mΩ, Small signal MOSFET in DFN0606-3	98
	<b>PMH950UPE</b>	P-channel 20 V, 1400 mΩ, Small signal MOSFET in DFN0606-3	98
	<b>PMH1200UPE</b>	P-channel 20 V, 1600 mΩ, Small signal MOSFET in DFN0606-3	98
	<b>PMPB8XN</b>	N-channel 20 V, 12 mΩ, Small signal MOSFET in DFN2020MD-6	100
	<b>PMPB10EN</b>	N-channel 30 V, 12 mΩ, small signal MOSFET in DFN2020MD-6	100
	<b>PMPB13UP</b>	P-channel 12 V, 16 mΩ, small signal MOSFET in DFN2020MD-6	100
	<b>PMPB15XP</b>	P-channel 12 V, 19 mΩ small signal MOSFET in DFN2020MD-6	100
	<b>PMPB27EP</b>	P-channel 30 V, 29 mΩ small signal MOSFET in DFN2020MD-6	100
	<b>PMPB16EP</b>	P-channel 30 V, 20 mΩ small signal MOSFET in DFN2020MD-6	100
	<b>PMCM950ENE</b>	N-channel 60 V, 41 mΩ small signal MOSFET in WLCSP9	101
	<b>PMV15UNEA</b>	N-Channel 20 V, 19 mΩ Q101 qualified small signal MOSFET in SOT23	103
	<b>PMN20ENA</b>	N-Channel 40 V, 23 mΩ Small Signal MOSFET in SOT457	103
	<b>PMN30ENEA</b>	N-channel 40 V, 30 mΩ Q101 Small signal MOSFET in SOT457	103
	<b>PMN40ENA</b>	N-channel 60 V, 43 mΩ Q101 small signal MOSFET in SOT457	103
	<b>PMV30ENEA</b>	N-channel 40 V, 30 mΩ Q101 Small signal MOSFET in SOT23	103
<b>PMV74EPE</b>	P-channel 30 V, 90 mΩ small signal MOSFET in SOT23	105	

## Analog & logic ICs

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Automotive analog & logic ICs	<b>74AHC244DGV-Q100</b>	Octal buffer/line driver (3-state) in SOT 408 package	113
	<b>74ALVC541DGV-Q100</b>	Octal buffer/line driver (3-state) in SOT408 package	113
	<b>74LVC16244ADGV-Q100</b>	16-bit buffer/line driver (3-state) in SOT408 package	114
	<b>74LVCH16244ADGV-Q100</b>	16-bit buffer/line driver with bus hold (3-state) in SOT408 package	114
	<b>74CB3Q3257PW-Q100</b>	4-bit 1-of-2 mux/demux with charge pump in SOT403 package	116
	<b>74AUP2G00DC-Q100</b>	Dual 2-input NAND gate in SOT765 package	120
	<b>74LVC16373ADGV-Q100</b>	16-bit D-type transparent latch (3-state) in SOT480 package	121
	<b>74LVCH16373ADGV-Q100</b>	16-bit D-type transparent latch with bushold (3-state) in SOT480 package	121
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	<b>LSF0108BQ-Q100</b>	8-bit bidirectional level translator; open-drain; push-pull in SOT764 package	122
	<b>NXB0104GU-Q100</b>	Dual supply translator; auto direction sensing (3-state) in SOT1161 package	122
	<b>NXS0104GU-Q100</b>	Dual supply translating transceiver; open drain; autosense in SOT1161 package	122
	<b>74LVC16245ADGV-Q100</b>	16-bit bus transceiver with direction pin; 5 V tolerant (3-state) in SOT480 package	126
	<b>74LVCH16245ADGV-Q100</b>	16-bit bus transceiver with bus hold with direction pin; 5 V tolerant (3-state) in SOT480 package	126
	<b>74LVC2G3157DP-Q100</b>	Dual 10 $\Omega$ single-pole double-throw analog switch in SOT552 package	127
	<b>74AHC1G4208GW-Q100</b>	08-stage divider and oscillator in SOT353 package	127
	<b>74AHC1G4210GW-Q100</b>	10-stage divider and oscillator in SOT353 package	127
	<b>74AHC1G4212GW-Q100</b>	12-stage divider and oscillator in SOT353 package	127
	<b>74AHC1G4214GW-Q100</b>	14-stage divider and oscillator in SOT353 package	127
	<b>74AHC1G4215GW-Q100</b>	15-stage divider and oscillator in SOT353 package	127
	<b>74AUP1G07GW-Q100</b>	Buffer; open-drain in SOT353 package	128
	<b>74AUP1G125GM-Q100</b>	Single buffer/line driver (3-state) in SOT886 package	128
	<b>74AUP1G125GS-Q100</b>	Single buffer/line driver (3-state) in SOT1202 package	128
	<b>74AUP2G04GM-Q100</b>	Dual inverter; unbuffered in SOT886 package	128
	<b>74LVC1G07GS-Q100</b>	Single buffer; open-drain in SOT1202 package	129
	<b>74LVC1G125GM-Q100</b>	Single buffer/line driver (3-state) in SOT886 package	129
	<b>74LVC2G04GS-Q100</b>	Dual inverter in SOT1202 package	129
	<b>74AUP1G157GM-Q100</b>	Single 2-input multiplexer in SOT886 package	130
	<b>74AUP1G00GW-Q100</b>	Single 2-input NAND gate in SOT353 package	131
	<b>74AUP1G08GM-Q100</b>	Single 2-input AND gate in SOT886 package	131
	<b>74AUP1G09GW-Q100</b>	Single 2-input AND gate; open-drain in SOT353 package	131
	<b>74AUP1G32GM-Q100</b>	Single 2-input OR gate in SOT886 package	131
	<b>74LVC1G08GM-Q100</b>	Single 2-input AND gate in SOT886 package	132
	<b>74LVC1G27GW-Q100</b>	Single 3-input NOR gate in SOT363 package	132
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	<b>74LVC1G14GM-Q100</b>	Single inverter Schmitt-trigger in SOT886 package	133
	<b>74LVC1G17GM-Q100</b>	Single buffer Schmitt-trigger in SOT886 package	133
	<b>74LVC2G14GM-Q100</b>	Dual inverter Schmitt-trigger in SOT886 package	133
	<b>74AUP1T34GM-Q100</b>	Single dual supply translating buffer in SOT886 package	134

## Analog &amp; logic ICs

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	<b>74AVC2T45GT-Q100</b>	Dual-bit dual-supply voltage level translating transceiver (3-state) in SOT833 package	134
	<b>74AVC2T245GU-Q100</b>	2-bit dual supply configurable translating transceiver (3-state) in SOT1160 package	134
	<b>74LVC1T45GM-Q100</b>	Single dual-supply voltage level translating transceiver (3-state) in SOT886 package	134
	<b>74LVC2T45GT-Q100</b>	Dual-bit dual-supply voltage level translating transceiver (3-state) in SOT833 package	134
	<b>74LVC2T45GS-Q100</b>	Dual-bit dual-supply voltage level translating transceiver (3-state) in SOT1203 package	134
Asynchronous interface analog & logic ICs	<b>74AHCV05A</b>	Hex inverter; Schmitt trigger; open-drain	136, 142
	<b>74LV7032A</b>	Quad 2-input OR gate; Schmitt trigger	144
	<b>74AXP4T245</b>	4-bit dual supply translating transceiver; 3-state	147
	<b>LSF0108</b>	8-bit bidirectional translator; open-drain; push-pull	148
	<b>NXB0104</b>	Dual supply translator; auto direction sensing (3-state)	148
	<b>NXS0104</b>	Dual supply translating transceiver; open drain; autosense	148
Synchronous interface analog & logic ICs	<b>74AHC1G4208</b>	08-stage divider and oscillator	158
	<b>74AHC1G4215</b>	14-stage divider and oscillator	158
Control analog & logic ICs	<b>74LV08A</b>	Quad 2-input AND gate	160
	<b>74LV00A</b>	Quad 2-input NAND gate	163
	<b>74LV02A</b>	Quad 2-input NOR gate	164
	<b>74LV32A</b>	Quad 2-input OR gate	165
	<b>74LV7032A</b>	Quad 2-input OR gate; Schmitt trigger	165





# Bipolar transistors

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<b>3-terminal adjustable shunt regulators.....</b>	<b>37</b>

# General purpose bipolar transistors

## Transistors single NPN

Types in **bold** represent new products

Package						Automotive-qualified						
						SOT23	SOT323 (SC-70)	DFN1010D-3 (SOT1215)	DFN1006-3 (SOT883)	DFN1006B-3 (SOT883B)	DFN1110D-3 (SOT8015)	DFN1412D-3 (SOT8009)
Size (mm)						2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	1.1 x 1.0 x 0.37	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37	1.1 x 1.0 x 0.47	1.4 x 1.2 x 0.47
P <sub>tot</sub> (mW)						250	200	750	250	250	280	325
V <sub>CE0</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min/typ	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)								
25	100	450	1200	100		PMST5089						
30	100	110 - 200	450 - 800	100	BC848B	BC848W						
		350	900	100		PMST5088						
32	100	110 - 420	220 - 800	100	BCW31 / 32 / 33							
		180 - 380	310 - 630	250	BCW60B / C / D							
45	100	110 - 420	220 - 800	100	BC847 / A / B / C	BC847W / AW / BW / CW	BC847AQA / BQA / CQA	BC847AM / BM / CM	BC847AMB / BMB / CMB	<b>BC847AQB / BQB / CQB</b>	<b>BC847AQC / BQC / CQC</b>	
		120 - 380	220 - 630	100	BCX70G / H / J / K							
		110 - 200	220 - 450	100	BCW71 / 72							
		500	1250	100	PMBT6429	PMST6429						
50	100	210 - 290	340 - 460	100 - 150	2PD601ART 2PD601ARL 2PD601ASL	2PD601ARW / SW						
		250	650	100	PMBT6428	PMST6428						
60	100	110 - 200	220 - 450	100	BCV71 / 72							
65	100	110 - 200	220 - 450	100	BC846 / A / B	BC846W / AW / BW		BC846BM	BC846BMB			
50	150	120 - 200	240 - 400	80	NXP3875Y / G							
	150	120 - 270	270 - 560	100		2PC4081Q / R / S		2PC4617QM / RM	2PC4617QMB / RMB			
	200	210	340	100	2PD601BRL							
45	500	100 - 250	250 - 600	100	BC817 / -16 / -25 / -40	BC817W / -16W / -25W / -40W	BC817-25QA / -40QA			<b>BC817-16QB / -25QB / -40QB</b>	<b>BC817-16QC / -25QC / -40QC</b>	
		100	600	100	BCX19							
50	500	85 - 170	170 - 340	140 - 180	2PD602AQL 2PD602ARL 2PD602ASL	2PD1820AR / S						
60	500	50	-	100		PMSTA05						
80	500	100	-	50	PMBTA06	PMSTA06						
80	500	100 - 160	250 - 400	100	<b>BC816-16 / -25</b>	<b>BC816-16W / -25W</b>						
45	800	100 - 250	250 - 600	100	BCW66F / G / H							
30	100	125 - 220	500 - 800	100	BC858B	BC858W						

## Transistors single PNP

Types in **bold** represent new products

Package						Automotive-qualified						
						SOT23	SOT323 (SC-70)	DFN1010D-3 (SOT1215)	DFN1006-3 (SOT883)	DFN1006B-3 (SOT883B)	DFN1110D-3 (SOT8015)	DFN1412D-3 (SOT8009)
Size (mm)						2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	1.1 x 1.0 x 0.37	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37	1.1 x 1.0 x 0.47	1.4 x 1.2 x 0.47
P <sub>tot</sub> (mW)						250	200	750	250	250	280	325
V <sub>CE0</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min/typ	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)								
32	100	120 - 215	260 - 500	100	BCW29 / 30							
		180 - 380	310 - 630	100	BCW61B / C / D							
45	100	210 - 290	340 - 460	70 - 80	2PB709ART 2PB709ARL 2PB709ASL	2PB709ARW / SW						
		180 - 380	310 - 630	100	BCX71H / J / K							
		120 - 215	260 - 500	100	BCW69 / 70							
		125 - 420	250 - 800	100	BC857 / A / B / C	BC857W / AW / BW / CW	BC857AQA / BQA / CQA	BC857AM / BM / CM	BC857AMB / BMB / CMB	<b>BC857AQB / BQB / CQB</b>	<b>BC857AQC / BQC / CQC</b>	
60	100	120	260	150	BCW89							
65	100	125 - 200	250 - 475	100	BC856 / A / B	BC856W / AW / BW		BC856BM	BC856BMB			
100	100	30	-	50	BSS63							
50	150	120 - 270	270 - 560	100		2PA1576Q / R / S		2PA1774QM / RM / SM	2PA1774QMB / RMB / SMB			
	200	210	340	100	2PB709BRL							
25	500	100	600	80	BCX18							
45	500	100 - 250	250 - 600	80	BC807 / -16 / -25 / -40	BC807W / -16W / -25W / -40W	BC807-25QA / -40QA			<b>BC807-16QB / -25QB / -40QB</b>	<b>BC817-16QC / -25QC / -40QC</b>	
		100	600	80	BCX17							

## Transistors single PNP

Types in **bold** represent new products

Package						Automotive-qualified						
						SOT23	SOT323 (SC-70)	DFN1010D-3 (SOT1215)	DFN1006-3 (SOT883)	DFN1006B-3 (SOT883B)	DFN1110D-3 (SOT8015)	DFN1412D-3 (SOT8009)
Size (mm)						2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	1.1 x 1.0 x 0.37	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37	1.1 x 1.0 x 0.47	1.4 x 1.2 x 0.47
P <sub>tot</sub> (mW)						250	200	750	250	250	280	325
V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min/typ	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)								
50	500	85 - 170	170 - 340	100 - 140	2PB710ARL 2PB710ASL	2PB1219AQ / R / S						
60	500	100	-	50		PMSTA55						
80	500	100	-	50	PMBTA06	PMSTA06						
80	500	100 - 160	250 - 400	80	<b>BC806-16 / -25</b>	<b>BC806-16W / -25W</b>						
45	800	100-250	250-600	80	BCW68F/G/H							

## High performance transistors (superior power dissipation)

Package							Automotive-qualified
							SOT23
Size (mm)							2.9 x 1.3 x 1.0
P <sub>tot</sub> (mW)							775
Polarity	V <sub>CEO</sub> (V)	V <sub>ebo</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)	
NPN	45	5	0.5	100	250	100	BC817K-16
				160	400	100	BC817K-25
				250	600	100	BC817K-40
PNP	45	5	0.5	100	250	80	BC807K-16
				160	400	80	BC807K-25
				250	600	80	BC807K-40

## Transistors double

Package						Automotive-qualified			
						SOT457 (SC-74)	SOT363 (SC-88)	DFN1412-6 (SOT1268)	DFN1010B-6 (SOT1216)
Size (mm)						2.9 x 1.5 x 1.0	2.0 x 1.25 x 0.95	1.4 x 1.2 x 0.5	1.0 x 1.0 x 0.37
P <sub>tot</sub> (mW)						750	300	480	350
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)				
NPN	40	100	120	450	100		PUMX1		
	45	100	200	450	100	BC847DS	BC847BS	BC847RA	BC847QAS
	65	100	110	-	100		BC846S		
			200	450	100	BC846DS	BC846BS		
	50	150	120	560	100		PUMX2		
45	500	160	400	80	BC817DS		BC817RA		
PNP	40	100	120	450	100	PIMT1	PUMT1		
	45	100	200	450	100		BC857BS	BC857RA	BC857QAS
	65	100	110	-	100		BC856S		
			200	450	100		BC856BS		
	45	500	160	400	80	BC807DS		BC807RA	
NPN / PNP	40	100	120	450	100		PUMZ1		
	45	100	200	450	100		BC847BPN	BC847RAPN	BC847QAPN
	50	100	120	560	100	PIMZ2	PUMZ2		
	65	100	200	450	100		BC846BPN		
	45	500	160	160	100 / 800	BC817DPN		BC817RAPN	

## General purpose bipolar transistors

### Switching transistors single

Package							SOT223 (SC-73)	SOT89 (SC-62)	SOT23	SOT323 (SC-70)	DFN1006-3 (SOT883)	DFN1006B-3 (SOT883B)	DFN1010D-3 (SOT1215)
Size (mm)							6.5 x 3.5 x 1.65	4.5 x 2.5 x 1.5	2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37	1.1 x 1.0 x 0.37
P <sub>tot</sub> (mW)							1700	1300	250	200	250	250	750
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)	t <sub>off</sub> (ns)							
NPN	40	200	100	300	180	1200			PMBS3904	PMSS3904			
	15	600	40	120	500	20			PMBT2369	PMST2369			
	40	200	100	300	300	250			MMBT3904				
	30	600	100	300	250	250			PMBT3904	PMST3904	PMBT3904M	PMBT3904MB	PMBT3904QA
	40	600	100	300	250	250	PZT4401	PXT4401	PMBT4401	PMST4401			
	40	600	100	300	300	250			MMBT2222A				
							PZT2222A	PXT2222A	PMBT2222A	PMST2222A	PMBT2222AM	PMBT2222AMB	PMBT2222AQA
PNP	40	800	100	300	300	250			BSR14				
	40	100	100	300	150	700			PMBS3906	PMSS3906			
	40	200	100	300	250	300			MMBT3906				
	40	600	100	300	200	350	PZT4403	PXT4403	PMBT4403	PMST4403	PMBT3906M	PMBT3906MB	
						365			PMBT2907				
						300				PMST2907A			
						365			BSR16				
	60	600	100	300	200	365	PZT2907A	PXT2907A	PMBT2907A		PMBT2907AM	PMBT2907AMB	PMBT2907AQA

### Switching transistors double

Package							SOT363 (SC-88)	SOT457 (SC-74)	DFN1412-6 (SOT1268)
Size (mm)							2.0 x 1.25 x 0.95	2.9 x 1.5 x 1.0	1.4 x 1.2 x 0.5
P <sub>tot</sub> (mW)							300	750	480
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)	t <sub>off</sub> (ns)			
NPN	40	200	100	300	300	250	PMBT3904YS	PMBT3904RA	
	40	600	100	300	250	250	PMBT4401YS		
					300	250	PMBT2222AYS		
PNP	40	200	100	300	250	300	PMBT3906YS		
	40	600	100	300	200	350	PMBT4403YS		
	60	600	100	300	200	365	PMBT2907AYS		
NPN / PNP	40	200	100	300	300 / 250	250 / 300	PMBT3946YPN		
					300 / 200	250 / 365		NMB2227A	

## 175°C capable products

Package							Automotive-qualified		
							SOT223 (SC-73)	SOT23	
Size (mm)							6.5 x 3.5 x 1.65	2.9 x 1.3 x 1.0	
P <sub>tot</sub> (mW)							1700	950	675
Polarity	V <sub>CEO</sub> (V)	V <sub>EB0</sub> (V)	I <sub>C</sub> (A)	h <sub>FE</sub> min	h <sub>FE</sub> max	f <sub>T</sub> min(MHz)			
NPN	45		0.5	100	250	250			
				160	400	400	BC817K-16H		
				250	600	600	BC817K-25H		
	80	7	1	63	250	100	BC817K-40H		
					160	100	BCP56H		
					100	250	BCP56-10H		
45		0.5	100	250	80				
			160	400	80	BCP56-16H			
			250	600	80	BC807-16H			
PNP	80	7	1	63	250	100	BC807-25H		
					100	100	BC807-40H		
					100	250	BCP53H		
							BCP53-10H		
							BCP53-16H		

## Medium power transistors


Types in **bold** represent new products

Package						Automotive-qualified			
						SOT223 (SC-73)	SOT89 (SC-62)	DFN2020-3 (SOT1061)	DFN2020D-3 (SOT1061D)
Size (mm)						6.5 x 3.5 x 1.65	4.5 x 2.5 x 1.5	2.0 x 2.0 x 0.62	2.0 x 2.0 x 0.62
P <sub>tot</sub> (mW)						1700	1300	1300	1300
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)				
NPN	20	2	85 - 160	375	40	BCP68 / -25	BC868 / -25	BC68PA / BC68-25PA	BC68PAS / BC68-25PAS
	45	1	63 - 100	160 - 250	100	BCP54 / -10 / -16	BCX54 / -10 / -16	BC54PA / BC54-10PA / BC54-16PA	BC54PAS / BC54-10PAS / BC54-16PAS
						<b>BCP54T / -10T / -16T</b>	<b>BCX54T / -10T / -16T</b>		
	60	1	63 - 100	160 - 250	100	BCP55 / -10 / -16	BCX55 / -10 / -16	BC55PA / BC55-10PA / BC55-16PA	BC55PAS / BC55-10PAS / BC55-16PAS
						<b>BCP55T / -10T / -16T</b>	<b>BCX55T / -10T / -16T</b>		
	80	1	63 - 100	160 - 250	100	BCP56 / -10 / -16	BCX56 / -10 / -16	BC56PA / BC56-10PA / BC56-16PA	BC56PAS / BC56-10PAS / BC56-16PAS
<b>BCP56T / -10T / -16T</b>						<b>BCX56T / -10T / -16T</b>			
			40 - 100	120 - 300	100	BSP41	BSR41		
PNP	20	2	85 - 160	250 - 375	40	BCP69 / -16 / -25	BC869 / -16 / -25	BC69PA / BC69-16PA / BC69-25PA	BC69PAS / BC69-16PAS / BC69-25PAS
	45	1	63 - 100	160 - 250	115 <sup>1)</sup> - 145 <sup>1)</sup>	BCP51 / -10 / -16	BCX51 / -10 / -16	BC51PA / BC51-10PA / BC51-16PA	BC51PAS / BC51-10PAS / BC51-16PAS
						<b>BCP51T / -10T / -16T</b>	<b>BCX51T / -10T / -16T</b>		
	60	1	63 - 100	160 - 250	100	BCP52 / -10 / -16	BCX52 / -10 / -16	BC52PA / BC52-10PA / BC52-16PA	BC52PAS / BC52-10PAS / BC52-16PAS
						<b>BCP52T / -10T / -16T</b>	<b>BCX52T / -10T / -16T</b>		
	80	1	63 - 100	160 - 250	115 <sup>1)</sup> - 145 <sup>1)</sup>	BCP53 / -10 / -16	BCX53 / -10 / -16	BC53PA / BC53-10PA / BC53-16PA	BC53PAS / BC53-10PAS / BC53-16PAS
<b>BCP53T / -10T / -16T</b>						<b>BCX53T / -10T / -16T</b>			
			40 - 100	120 - 300	100	BSP31	BSR30 / 31		
						BSP32 / 33	BSR33		

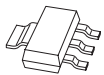




<sup>1)</sup> Typical value

## General purpose bipolar transistors

### General Purpose Power Transistors



Package							DPAK (SOT428C)
							
Size (mm)							6.1 x 6.6
P <sub>tot</sub> (mW)							1750
V <sub>CEO</sub> (V)	I <sub>C</sub> (A)	h <sub>FE</sub> min	hfe max	f <sub>T</sub> min MHz	Polarity	Automotive-qualified	
80	8	60	-	160	NPN	No	<b>MJD44H11</b>
					PNP	No	<b>MJD45H11</b>
					NPN	Yes	<b>MJD44H11A</b>
					PNP	Yes	<b>MJD45H11A</b>
100	3	10	50	3	NPN	No	<b>MJD31C</b>
					PNP	No	<b>MJD32C</b>
					NPN	Yes	<b>MJD31CA</b>
					PNP	Yes	<b>MJD32CA</b>

### High voltage transistors



						Automotive-qualified				
Package						SOT223 (SC-73)	SOT89 (SC-62)	SOT457 (SC-74)	SOT23	SOT323 (SC-70)
										
Size (mm)						6.5 x 3.5 x 1.65	4.5 x 2.5 x 1.5	2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95
P <sub>tot</sub> (mW)						1700	1300	750	250	200
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	f <sub>T</sub> min (MHz)					
NPN	140	300	60	250	100				PMBT5550	PMST5550
	160	300	80	250	100				PMBT5551 / BSR19A	PMST5551
	250	100	50		60	BF722	BF622		BF822	
	300	100	50		60	BF720	BF620		BF820	BF820W
			40		50	PZTA42	PXTA42		PMBTA42	PMSTA42
	350	100	40		70	BSP19	BST39			
400	300	50	200	20	PZTA44			PMBTA44		
PNP	100	100	30		50				BSS63	
	250	100	50		60	BF723				
			50		60		BF623		BF823	
	300	100	50		60		BF621		BF821	
40				50	PZTA92	PXTA92		PMBTA92	PMSTA92	
2 x NPN	300	100	40		50			PMBTA42DS		

For high-voltage transistors with increased performance please refer to our high-voltage low V<sub>CEsat</sub> transistor portfolio on page 23.


## PNP LED driver

			Automotive-qualified	
			SOT457	SOT23
Package				
Size (mm)			2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0
P <sub>tot</sub> (mW)			750	480
Maximum supply voltage V <sub>s</sub> max (V)	Typical stabilized output current I <sub>out</sub> typ (mA)	Maximum stabilized output current I <sub>out</sub> max (mA)		
18	10	-		NCR401T
	20	-		NCR402T
40	10	65	NCR401U	
	20	65	NCR402U	
	50	65	NCR405U	

## NPN LED driver

			Automotive-qualified	
			SOT457	SOT223
Package				
Size (mm)			2.9 x 1.5 x 1.0	6.5 x 3.5 x 1.65
P <sub>tot</sub> (mW)			750	1250
Maximum supply voltage V <sub>s</sub> max (V)	Typical stabilized output current I <sub>out</sub> typ (mA)	Maximum stabilized output current I <sub>out</sub> max (mA)		
16	10	250	NCR320U	
			NCR321U	
40	10	150	NCR420U	
			NCR421U	
16	10	250		NCR320Z
				NCR321Z
40	10	150		NCR420Z
				NCR421Z

## Constant current source

Automotive-qualified					
Package	SOT353 (SC-88A)				
					
Size (mm)	2.0 x 1.25 x 0.95				
P <sub>tot</sub> (mW)	335				
Type	PSSI2021SAY				
Description	Maximum supply voltage	Maximum supply current	Typical stabilized output current	Minimum stabilized output current	Maximum stabilized output current
Parameter	V <sub>s</sub> max (V)	I <sub>s</sub> max (mA)	I <sub>out</sub> typ (μA)	I <sub>out</sub> min (mA)	I <sub>out</sub> max (mA)
Value	75	2.2	15	0.015	50

## Darlington transistors

Package					Automotive-qualified		
					SOT223 (SC-73)	SOT89 (SC-62)	SOT23
Size (mm)					6.5 x 3.5 x 1.65	4.5 x 2.5 x 1.5	2.9 x 1.3 x 1.0
P <sub>tot</sub> (mW)					1700	1300	250
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	f <sub>r</sub> min (MHz)			
NPN	30	500	10000	125			PMBTA13
			20000		PZTA14	PXTA14	PMBTA14
	45	1000	2000	200		BCV29	BCV27
			2000		BSP50	BST50	
	60	500	10000	220		BCV49	BCV47
			2000		BSP51	BST51	
	80	1000	2000	200		BST52	
			2000		BSP52	BST52	
PNP	30	500	20000	125			PMBTA64
			2000				BCV28
	45	1000	2000	200		BSP60	BST60
			2000			BCV48	BCV46
	60	500	10000	220		BSP61	BST61
			2000		BSP62	BST62	
	80	1000	2000	200			
			2000				

## Schmitt triggers









Package							Automotive-qualified
							SOT143B
Size (mm)							2.9 x 1.3 x 1.0
P <sub>tot</sub> (mW)							250
Polarity	V <sub>CEO</sub> (V) TR1	V <sub>CEO</sub> (V) TR2	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	V <sub>CEsat</sub> typ (mV)	
NPN	30	6	100	110	800	250	BCV63 / B
PNP	30	6	100	220	475	250	BCV64B

## Low noise transistors

Package							Automotive-qualified	
							SOT23	SOT323 (SC-70)
Size (mm)							2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95
P <sub>tot</sub> (mW)							250	200
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	Noise figure max (dB)	h <sub>FE</sub> min	h <sub>FE</sub> max	f <sub>r</sub> min (MHz)		
NPN	30	100	4	200	450	100	BC849B	BC849BW
				420	800	100	BC849C	BC849CW
	45	100	4	200	450	100	BC850B	BC850BW
				420	800	100	BC850C	BC850CW
PNP	30	100	4	220	475	100	BC859B	BC859BW
				420	800	100	BC859C	BC859CW
	45	100	4	220	475	100	BC860B	BC860BW
				420	800	100	BC860C	BC860CW













Matched pair transistors- part 1

							Automotive-qualified			
Package							SOT143B	SOT457 (SC-74)	LFPAK56D (SOT1205)	
Size (mm)							2.9 x 1.3 x 1.0	2.9 x 1.5 x 1.0	5 x 6 x 1.1	
P <sub>tot</sub> (mW)							250	750	1250	
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	h <sub>FE1</sub> /h <sub>FE2</sub>	V <sub>BE1</sub> - V <sub>BE2</sub> (mV)				
NPN	30	100	110	800	0.7 <sup>1)</sup>	n.a.	BCV61/A/B/C			
	45	100	200	450	0.9 <sup>1)</sup>	2	BCM61B			
								BCM847DS		
	80	100	63	250	0.95	n.a.	BCM56DS			
	100	3000	150	-	0.95	n.a.			PHPT610035NK	
Configuration										
PNP	30	100	100	800	0.7 <sup>1)</sup>	n.a.	BCV62/A/B/C			
	45	100	200	450	0.9 <sup>1)</sup>	2	BCM62B			
								BCM857DS		
	65	100	200	450	0.9	2		BCM856DS		
	80	100	63	250	0.95	n.a.		BCM53DS		
100	3000	150	-	0.9	n.a.			PHPT610035PK		
Configuration										

<sup>1)</sup> I<sub>C1</sub> / I<sub>E2</sub>


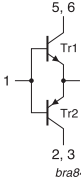

Matched pair transistors - part 2

							Automotive-qualified				
Package							SOT353 (SC-88A)	SOT363 (SC-88)	SOT1216 (DFN1010B-6)		
Size (mm)							2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.1 x 1.0 x 0.37		
P <sub>tot</sub> (mW)							300	300	350		
Polarity	V <sub>CEO</sub> (V)	I <sub>C</sub> (mA)	h <sub>FE</sub> min	h <sub>FE</sub> max	h <sub>FE1</sub> /h <sub>FE2</sub>	V <sub>BE1</sub> - V <sub>BE2</sub> (mV)					
NPN	45	100	200	450	0.9 <sup>1)</sup>	2		BCM847BS			
					0.95	2	PMP4501G	PMP4501Y	BCM847QAS	PMP4501QAS	
					0.98	2	PMP4201G	PMP4201Y			
	65	100	200	450	0.9	2		BCM846BS			
Configuration											
PNP	45	100	200	450	0.9 <sup>1)</sup>	2		BCM857BS			
					0.95	2	PMP5501G	PMP5501Y	BCM857QAS	PMP5501QAS	
					0.98	2	PMP5201G	PMP5201Y			
	65	100	200	450	0.9	2		BCM856BS			
Configuration											

<sup>1)</sup> I<sub>C1</sub> / I<sub>E2</sub>

## General purpose bipolar transistors

### MOSFET driver

			Automotive-qualified			
$V_{CE0}$ (V)	$I_C$ (A)	$I_{cm}$ [A]	Type	Package	Remark	Configuration
30	0.1	0.2	BCV65	SOT143B 	General-purpose transistors	
40	0.6	1	PMD2001D	SOT457 	Switching transistors with reduced storage time	
	1	2	PMD3001D		Low $V_{CEsat}$	

### Medium frequency transistors

						Automotive-qualified	
Package						SOT23	SOT323 (SC-70)
Size (mm)						2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95
$P_{tot}$ (mW)						250	200
Polarity	$V_{CE0}$ (V)	$I_C$ (mA)	$h_{FE}$ min	$h_{FE}$ max	$f_T$ typ (MHz)		
NPN	15	100	40	-	500	BF570	
	20	25		85	>275	BFS20	BFS20W
		30	65	225	260	BFS19	
PNP	40	25	67	220	380	BF840	
	30	25	25	50	250	BF824	BF824W
40	50		-	>325	BF550		

# Low $V_{CEsat}$ transistors single NPN up to 2000 mW

Package							Automotive-qualified				
							SOT223 (SC-73)	SOT89 (SC-62)	SOT457 (SC-74)	DFN2020D-3 (SOT1061D)	DFN2020-3 (SOT1061)
Size (mm)							6.5 x 3.5 x 1.65	4.5 x 2.5 x 1.5	2.9 x 1.5 x 1.0	2.0 x 2.0 x 0.62	2.0 x 2.0 x 0.62
$P_{tot}$ (mW)							1700	1650	750	1300	1300
$V_{CE0}$ (V)	$I_C$ (A)	$I_{CM}$ (A)	$h_{FE}$ min/typ	@ $I_C$ (A)	@ $V_{CE}$ (V)	$V_{CEsat}$ typ (mV); $I_C = 0.5$ A; $I_B = 0.05$ A					
12	5.3	10.6	300 / 530	0.5	2	18		PBSS301NX			
	5.8	11.6	300 / 530	0.5	2	18	PBSS301NZ				
	6	7	280 / 440	0.5	2	20					PBSS4612PA
20	3	5	220 / 390	0.5	2	40		PBSS4320X			
	4	15	300 / 450	0.5	2	30			PBSS301ND		
	5	10	300 / 450	0.5	2	35		PBSS4520X			
	5.3	10.6	300 / 570	0.5	2	20		PBSS302NX			
	5.8	10.2	300 / 570	0.5	2	20	PBSS302NZ				
	6	7	280 / 440	0.5	2	20					PBSS4620PA
	7	15	300 / 550	0.5	2	12		PBSS4021NX			
	8	20	300 / 550	0.5	2	9	PBSS4021NZ				
30	3	5	300 / 490	0.5	2	45		PBSS4330X			
	3	5	300 / 465	0.5	2	40				PBSS4330PAS <sup>2)</sup>	PBSS4330PA
	3.5	6	300 / 500	0.5	2	70			PBSS4032ND <sup>3)</sup>		
	4.7	10	300 / 500	0.5	2	57		PBSS4032NX <sup>3)</sup>			
	5.1	10.2	300 / 480	0.5	2	20		PBSS303NX			
	5.4	10	300 / 500	0.5	2	57	PBSS4032NZ <sup>3)</sup>				
	5.5	11	300 / 480	0.5	2	20	PBSS303NZ				
40	6	7	280 / 450	0.5	2	21					PBSS4630PA
	2	3	300 / -	0.5	5	140		PBSS4240X			
	4	15	300 / 520	0.5	2	35			PBSS302ND		
		10	300 / 500	0.5	2	21		PBSS4540X			
5	10	300 / 500	0.5	2	25	PBSS4540Z					
50	2	5	300 / -	0.5	2	90 <sup>2)</sup>		PBSS4250X			
	3	5	200 / 280	0.5	2	65			PBSS4350D		
			300 / 460	0.5	2	50		PBSS4350X			
200 / 280			0.5	2	60 <sup>1)</sup>	PBSS4350Z					
60	1	2	170 / -	0.5	10	200 <sup>2)</sup>		PBSS4160X			
	3	6	200 / 360	0.5	5	45				PBSS4360PAS <sup>2)</sup>	
			200 / -	0.5	5	45	PBSS4360Z	PBSS4360X			
			345 / 570	0.5	2	40			PBSS303ND		
	4.7	9.4	300 / 520	0.5	2	25		PBSS304NX			
	5.2	10.4	300 / 520	0.5	2	25	PBSS304NZ				
	6	7	280 / 440	0.5	2	22					PBSS4560PA
6.2	15	300 / 500	0.5	2	17		PBSS4041NX				
80	7	15	300 / 500	0.5	2	13	PBSS4041NZ				
	3	6	240 / 360	0.5	2	40			PBSS304ND		
	4	10	250 / 400	0.5	2	25		PBSS4480X			
	4.6	9.2	300 / 470	0.5	2	25		PBSS305NX			
	5.1	10.2	300 / 470	0.5	2	25	PBSS305NZ				
100	1	3	150 / 290	0.25	10	75			PBSS8110D		
			150 / 290	0.25	10	73		PBSS8110X			
			150 / 290	0.25	10	73	PBSS8110Z				
	3	4	170 / 275	0.5	2	45			PBSS305ND		
	4.5	9	200 / 330	0.5	2	27		PBSS306NX			
	5.1	10.2	200 / 330	0.5	2	27	PBSS306NZ				
	5.2	6	180 / 285	0.5	2	30					PBSS8510PA

<sup>1)</sup>  $I_C / I_B = 20$  <sup>2)</sup>  $V_{CEsat}$  (max) <sup>3)</sup> Optimized for high-speed switching  
<sup>2)</sup> 175°C capable

## Low VCEsat transistors single NPN up to 750 mW

Types in **bold** represent new products

Package							Automotive-qualified					
							SOT23	SOT323 (SC-70)	SOT363 (SC-88)	DFN1006-3 (SOT883)	DFN1006B-3 (SOT883B)	DFN1010D-3 (SOT1215)
Size (mm)							2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37	1.1 x 1.0 x 0.37
P <sub>tot</sub> (mW)							480	350	430	250	250	750
V <sub>CEO</sub> (V)	I <sub>C</sub> (A)	I <sub>CM</sub> (A)	h <sub>FE</sub> min/typ	@ I <sub>C</sub> (A)	@ V <sub>CE</sub> (V)	V <sub>CEsat</sub> typ (mV); I <sub>C</sub> = 0.5 A; I <sub>B</sub> = 0.05 A						
15	0.5	1	200 / 325	0.01	2	-			PBSS2515M	PBSS2515MB		
20	1	3	350 / 470	0.1	2	110 <sup>2)</sup>	PBSS4120T					
	2	5	220 / 330	0.1	2	45	PBSS4320T					
	4.3	8	300 / 550	0.5	2	21	PBSS4021NT					
30	1	1.5	230 / 380	0.5	2	90					PBSS4130QA	
		3	300 / 450	0.5	2	120 <sup>2)</sup>	PBSS4130T					
	2	3	300 / 450	0.5	2	70	PBSS4230T					
			230 / 380	0.5	2	75					PBSS4230QA	
2.6	5	300 / 500	0.5	2	80	PBSS4032NT <sup>3)</sup>						
40	0.5	1	200 / 550	0.01	2	200 <sup>2)</sup>			PBSS2540M	PBSS2540MB		
			300 / 440	0.5	5	130		PBSS4140U				
			300 / 510	0.5	5	120	PMMT491A					
	2	3	300 / 420	0.5	5	130	PBSS4140T					
350 / 470			0.1	2	70		PBSS4240Y					
300 / 450	0.5	2	70	PBSS4240T								
50	2	5	300 / 495	0.5	2	60	PBSS4350T					
60	1	1.5	150 / 240	0.5	2	90					PBSS4160QA	
			200 / 420	0.5	5	120		PBSS4160U				
		200 / 350	0.5	5	110	PBSS4160T						
	2	3	150 / 240	0.5	2	75					PBSS4260QA	
3.8	8	300 / 500	0.5	2	29	PBSS4041NT						
100	1	3	150 / 400	0.25	10	80			PBSS8110Y			
			150 / 300	0.25	10	70	PBSS8110T					

<sup>1)</sup> I<sub>C</sub> / I<sub>B</sub> = 20 <sup>2)</sup> V<sub>CEsat</sub> (max) <sup>3)</sup> Optimized for high-speed switching

## Low $V_{CEsat}$ transistors single PNP up to 2000 mW

Package							Automotive-qualified				
							SOT223 (SC-73)	SOT89 (SC-62)	SOT457 (SC-74)	DFN2020D-3 (SOT1061D)	DFN2020-3 (SOT1061)
Size (mm)							6.5 x 3.5 x 1.65	4.5 x 2.5 x 1.5	2.9 x 1.5 x 1.0	2.0 x 2.0 x 0.62	2.0 x 2.0 x 0.62
P <sub>tot</sub> (mW)							1700	1650	750	1300	1300
V <sub>CEO</sub> (V)	I <sub>C</sub> (A)	I <sub>CM</sub> (A)	h <sub>FE</sub> min/typ	@ I <sub>C</sub> (A)	@ V <sub>CE</sub> (V)	V <sub>CEsat</sub> typ (mV); I <sub>C</sub> = 0.5 A; I <sub>B</sub> = 0.05 A					
12	5.3	10.6	250 / 400	0.5	2	20		PBSS301PX			
	5.7	11.4	250 / 400	0.5	2	20	PBSS301PZ				
	6	7	220 / 335	0.5	2	20					PBSS5612PA
20	3	5	200 / -	0.5	2	80 <sup>2)</sup>			PBSS5320D		
			220 / 450	0.5	2	50		PBSS5320X			
	4	15	250 / 400	0.5	2	35			PBSS301PD		
	5	10	300 / 430	0.5	2	45			PBSS5520X		
	5.1	10.2	250 / 370	0.5	2	25			PBSS302PX		
	5.5	11	250 / 370	0.5	2	25	PBSS302PZ				
	6	7	230 / 345	0.5	2	25					PBSS5620PA
	6.2	15	250 / 400	0.5	2	18			PBSS4021PX		
30	2.7	5	200 / 350	0.5	2	87			PBSS4032PD <sup>3)</sup>		
			200 / 380	0.5	2	50		PBSS5330X			
	3	5	200 / 320	0.5	2	45				PBSS5330PAS <sup>2)</sup>	PBSS5330PA
			200 / 350	0.5	2	70		PBSS4032PX <sup>3)</sup>			
	4.2	10	200 / 350	0.5	2	70					
	4.4	10	200 / 350	0.5	2	70	PBSS4032PZ <sup>3)</sup>				
	5.1	10.2	250 / 400	0.5	2	25			PBSS303PX		
	5.3	10.6	250 / 400	0.5	2	25	PBSS303PZ				
6	7	200 / 335	0.5	2	25					PBSS5630PA	
40	2	3	215 / -	0.5	5	170			PBSS5240X		
			200 / 310	0.5	2	46			PBSS302PD		
	4	10	250 / 370	0.5	2	33			PBSS5540X		
			250 / 350	0.5	2	40 <sup>1)</sup>	PBSS5540Z				
50	2	5	200 / -	0.5	2	90 <sup>2)</sup>			PBSS5250X		
			200 / 300	0.5	2	70			PBSS5350D		
	3	5	200 / 375	0.5	2	70			PBSS5350X		
			200 / 300	0.5	2	70	PBSS5350Z				
60	3	6	130 / 220	0.5	5	55				PBSS5360PAS <sup>2)</sup>	
			130 / -	0.5	5	55	PBSS5360Z	PBSS5360X			
			180 / 265	0.5	2	55			PBSS303PD		
	4.2	8.4	200 / 295	0.5	2	35			PBSS304PX		
	4.5	9	200 / 295	0.5	2	35	PBSS304PZ				
	5	6	170 / 260	0.5	2	35					PBSS560PA
	5	15	200 / 300	0.5	2	30			PBSS4041PX		
5.7	15	200 / 300	0.5	2	22	PBSS4041PZ					
80	3	5	155 / 225	0.5	2	55			PBSS304PD		
			180 / 265	0.5	2	40					PBSS5580PA
	4	10	200 / 300	0.5	2	35			PBSS5480X		
			200 / 280	0.5	2	36			PBSS305PX		
	4.5	9	200 / 280	0.5	2	36	PBSS305PZ				
100	1	3	150 / 350	0.5	5	100			PBSS9110D		
			150 / 350	0.5	5	90			PBSS9110X		
			150 / -	0.5	5	90	PBSS9110Z				
	2	3	175 / 275	0.5	2	65			PBSS305PD		
	2.7	4	180 / 295	0.5	2	45					PBSS9410PA
	3.7	7.4	200 / 300	0.5	2	45			PBSS306PX		
4.1	8.2	200 / 300	0.5	5	45	PBSS306PZ					

<sup>1)</sup> I<sub>C</sub> / I<sub>B</sub> = 20 <sup>2)</sup> V<sub>CEsat</sub> (max) <sup>3)</sup> Optimized for high-speed switching  
<sup>2)</sup> 175°C capable

Low  $V_{CEsat}$  transistors single PNP up to 750 mW

Package							Automotive-qualified					
							SOT23	SOT323 (SC-70)	SOT363 (SC-88)	DFN1006-3 (SOT883)	DFN1006B-3 (SOT883B)	DFN1010D-3 (SOT1215)
Size (mm)							2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37	1.1 x 1.0 x 0.37
P <sub>tot</sub> (mW)							480	350	430	250	250	750
V <sub>CEO</sub> (V)	I <sub>C</sub> (A)	I <sub>CM</sub> (A)	h <sub>FE</sub> min/typ	@ I <sub>C</sub> (A)	@ V <sub>CE</sub> (V)	V <sub>CEsat</sub> typ (mV); I <sub>C</sub> = 0.5 A; I <sub>B</sub> = 0.05 A						
15	0.5	1	200 / 260	0.01	2	150			PBSS3515M	PBSS3515MB		
20	1	2	300 / 450	0.1	2	125 <sup>2)</sup>	PBSS5120T					
	2	3	225 / -	0.5	2	80 <sup>2)</sup>	PBSS5220T					
		5	220 / 420	0.5	2	50	PBSS5320T					
	3.5	8	250 / 400	0.5	2	35	PBSS4021PT					
30	1	1.5	180 / 295	0.5	2	85					PBSS5130QA	
		260 / 350	0.5	2	110	PBSS5130T						
	2	3	300 / 450	0.1	2	70	PBSS5230T					
		180 / 295	0.5	2	70						PBSS5230QA	
	2.4	5	200 / 320	0.5	2	95	PBSS4032PT <sup>3)</sup>					
40	0.5	1	200 / 380	0.01	2	220			PBSS3540M	PBSS3540MB		
	1	2	300 / 520	0.1	5	130		PBSS5140U				
			300 / 800	0.1	5	130	PMMT591A					
		300 / 510	0.1	5	130	PBSS5140T						
	2	3	300 / -	0.1	2	110 <sup>2)</sup>			PBSS5240Y			
			300 / 450	0.1	2	70	PBSS5240T					
50	2	3	200 / -	0.5	2	90 <sup>2)</sup>	PBSS5250T					
							PBSS5250TH					
	3	3	200 / -	0.5	2	90 <sup>2)</sup>	PBSS5350TH					
5		200 / 360	0.5	2	55	PBSS5350T						
60	1	1.5	120 / 185	0.5	2	125					PBSS5160QA	
			150 / 250	0.5	5	135		PBSS5160U				
		150 / 250	0.5	5	120	PBSS5160T						
	1.7	2.5	120 / 185	0.5	2	105					PBSS5260QA	
	2.7	8	200 / 300	0.5	2	49	PBSS4041PT					
100	1	3	150 / -	0.25	5	93			PBSS9110Y			
			150 / 350	0.5	5	95	PBSS9110T					




<sup>1)</sup> IC / IB = 20 <sup>2)</sup> V<sub>CEsat</sub> (max) <sup>3)</sup> Optimized for high-speed switching

## Low $V_{CEsat}$ transistors double

Package										Automotive-qualified		
										SOT457 (SC-74)	DFN2020-6 (SOT1118)	DFN2020D-6 (SOT1118D)
Size (mm)										2.9 x 1.5 x 1.0	2.0 x 2.0 x 0.62	2.0 x 2.0 x 0.62
$P_{tot}$ (mW)										750	1300	1300
$V_{CE0}$ (V)	$I_C$ (A)	Polarity	$h_{FE}$ min/typ	@ $I_C$ (A)	@ $V_{CE}$ (V)	$V_{CEsat}$ typ (mV); $I_C = 0.5$ A; $I_B = 0.05$ A	$V_{CEsat}$ max (mV)	@ $I_C$ (A)	@ $I_B$ (A)			
20	2	NPN/NPN	230	0.5	2	60	90	0.5	0.05			PBSS4220PANS
	2	PNP/PNP	210	0.5	2	70	110	0.5	0.05			PBSS5220PAPS
30	1	NPN/NPN	210	0.5	2	75	100	0.5	0.05		PBSS4130PAN	
		PNP/PNP	170	0.5	2	85	140	0.5	0.05		PBSS5130PAP	
		NPN/PNP	210/170	0.5	2	75/85	100/140	0.5	0.05		PBSS4130PANP	
	2	NPN/NPN	230	0.5	2	60	80	0.5	0.05		PBSS4230PAN	
		PNP/PNP	210	0.5	2	75	110	0.5	0.05		PBSS5230PAP	
		NPN/PNP	230/210	0.5	2	60/75	80/100	0.5	0.05		PBSS4230PANP	
40	1	NPN/PNP	300/250	0.5	5	130/150	500	1	0.1	PBSS4140DPN		
	2	NPN/PNP	300/250	0.5	5	80/100	400/530	2	0.2	PBSS4240DPN		
60	1	2 x NPN	200	0.5	5	115	250	1	0.1	PBSS4160DS		
		2 x PNP	150	0.5	5	120	330	1	0.1	PBSS5160DS		
		NPN/PNP	200/150	0.5	5	115/120	250/330	1	0.1	PBSS4160DPN		
	1	NPN/NPN	150	0.5	2	90	120	0.5	0.05		PBSS4160PAN	PBSS4160PANS
		PNP/PNP	120	0.5	2	125	180	0.5	0.05		PBSS5160PAP	PBSS5160PAPS
		NPN/PNP	150/120	0.5	2	90/125	120/180	0.5	0.05		PBSS4160PANP	PBSS4160PANPS
	2	NPN/NPN	210	0.5	2	70	90	0.5	0.05		PBSS4260PAN	PBSS4260PANS
		PNP/PNP	140	0.5	2	100	140	0.5	0.05		PBSS5260PAP	PBSS5260PAPS
		NPN/PNP	210/140	0.5	2	70/100	90/140	0.5	0.05		PBSS4260PANP	PBSS4260PANPS
120	1	NPN/NPN	240	0.1	2	90	120	0.5	0.05		PBSS4112PAN	
		PNP/PNP	190	0.1	2	150	220	0.5	0.05		PBSS5112PAP	
		NPN/PNP	240/190	0.1	2	90/150	120/220	0.5	0.05		PBSS4112PANP	

<sup>1)</sup>  $I_C / I_B = 20$  <sup>2)</sup> Device mounted on a ceramic PCB, Al<sub>2</sub>O<sub>3</sub>, standard footprint <sup>3)</sup> Optimized for high-speed switching

## Low $V_{CEsat}$ transistors load switches

Package				Automotive-qualified		
				SOT457 (SC-74)	SOT363 (SC-88)	
Size (mm)				2.9 x 1.5 x 1.0		2.0 x 1.25 x 0.95
P <sub>tot</sub> (mW)				750 <sup>1)</sup>	600 <sup>1)</sup>	300 <sup>2)</sup>
V <sub>CEO</sub> (V)	I <sub>C</sub> (A)	V <sub>CEsat</sub> max (mV); I <sub>C</sub> = 0.5 A; I <sub>B</sub> = 0.05 A	R1, R2 (kΩ)			
15	0.5	250	2.2			PBLS1501Y
			4.7			PBLS1502Y
			10			PBLS1503Y
			22			PBLS1504Y
20	1	150	2.2		PBLS2001D	
			4.7		PBLS2002D	
			10		PBLS2003D	
			22		PBLS2004D	
	1.8	70	2.2	PBLS2021D		
			4.7	PBLS2022D		
			10	PBLS2023D		
			22	PBLS2024D		
40	0.5	350	2.2			PBLS4001Y
			4.7			PBLS4002Y
			10			PBLS4003Y
			22			PBLS4004Y
			47			PBLS4005Y
	1	170	2.2		PBLS4001D	
			4.7		PBLS4002D	
			10		PBLS4003D	
			22		PBLS4004D	
			47		PBLS4005D	
60	1	180	2.2		PBLS6001D	
			4.7		PBLS6002D	
			10		PBLS6003D	
			22		PBLS6004D	
			47		PBLS6005D	
	1.5	100	2.2	PBLS6021D		
			4.7	PBLS6022D		
			10	PBLS6023D		
			22	PBLS6024D		

<sup>1)</sup> Device mounted on a ceramic PCB, Al<sub>2</sub>O<sub>3</sub>, standard footprint

<sup>2)</sup> Device mounted on an FR4 PCB, single-sided copper, tin-plated, and standard footprint




## Low $V_{CEsat}$ high voltage transistors

Package					Automotive-qualified				
					SOT223 (SC-73)	SOT89 (SC-62)	DFN1010D-3 (SOT1215)	SOT23	
Size (mm)					6.5 x 3.5 x 1.65	4.5 x 2.5 x 1.5	1.1 x 1.0 x 0.37	2.9 x 1.3 x 1.0	
$P_{tot}$ (mW)					1700	1300	750	250	
Polarity	$V_{CEO}$ [max] (V)	$I_C$ (A)	hFE [min]	hFE [max]					
NPN	150	0.5	100				PBHV8515QA		
		1	70	300				PBHV8115TLH	
			100					PBHV8115T	
							PBHV8115X		
						PBHV8115Z			
					PBHV8215Z				
	180	1	100					PBHV8118T	
	400	0.5	100			PBHV8540Z	PBHV8540X		PBHV8540T
		1	100			PBHV8140Z			
	500	0.15	50					PMBTA45	
600	0.1	70			PBHV2160Z				
	0.5	70			PBHV8560Z				
PNP	140	4	100					PBHV9414Z	
	150	0.5	100				PBHV9515QA		
		1	70	300					PBHV9115TLH
			100						PBHV9115T
							PBHV9115X		
					PBHV9115Z				
					PBHV9215Z				
	400	0.25	100						PBHV9040T
		0.5	100				PBHV9040X		
			140	450			PBHV9540Z	PBHV9540X	
	500	0.15	100						PBHV9050T
		0.25	100			PBHV9050Z			
	600	0.1	70			PBHV3160Z			
0.5		70			PBHV9560Z				


## Low $V_{CEsat}$ RETs

Package					Automotive-qualified	
					SOT23	
Size (mm)					2.9 x 1.3 x 1.0	
$P_{tot}$ (mW)					250	
$V_{CEO}$ (V)	$I_C$ (mA)		R1 (k $\Omega$ )	R2 (k $\Omega$ )	NPN	PNP
40	600	R1 = R2	1	1	PBRN113ET	PBRP113ET
			2.2	2.2	PBRN123ET	PBRP123ET
		R1 $\neq$ R2	1	10	PBRN113ZT	PBRP113ZT
			2.2	10	PBRN123YT	PBRP123YT

## Low $V_{CEsat}$ transistors PNP - N-channel MOSFET combination

											Automotive-qualified
Package											DFN2020-6 (SOT1118)
											
Size (mm)											2.0 x 2.0 x 0.62
$P_{tot}$ (mW)											1300
$V_{CE0}$ (V)	$I_C$ (A)	$h_{FE}$ min	$h_{FE}$ max	@ $I_C$ (mA)	@ $V_{CE}$ (V)	$R_{CEsat}$ typ (m $\Omega$ )	$V_{DS}$ (V)	$V_{GS}$ (V)	$I_D$ (A)	$R_{Dson}$ typ (m $\Omega$ )	
40	2	300	800	100	5	240	30	0.7	0.66	390	PBSM5240PF
		100	-	100	5	240	30	0.7	0.66	390	PBSM5240PFH

## Low $V_{CEsat}$ power transistors single (175oC capable)

									LFPAK56 (SOT669)
Package									
Size (mm)									5 x 6 x 1.1
$P_{tot}$ (mW)									1250
$V_{CE0}$ (V)	$I_C$ (A)	$I_{CM}$ [max] (A)	$h_{FE}$ min/typ	@ $I_C$ (A)	@ $V_{CE}$ (V)	Polarity	Automotive-qualified		
40	6	14	200 / 400	0.5	2	NPN	Yes	PHPT60406NY	
		12		0.5	2	PNP	Yes	PHPT60406PY	
	10	20	200 / 400	0.5	2	NPN	Yes	PHPT60410NY	
				0.5	2	PNP	Yes	PHPT60410PY	
	15	30	200 / 400	0.5	2	NPN	Yes	PHPT60415NY	
				0.5	2	PNP	Yes	PHPT60415PY	
60	3	8	200 / 400	0.5	2	NPN	Yes	PHPT60603NY	
				0.5	2	PNP	Yes	PHPT60603PY	
	6	14	200 / 400	0.5	2	NPN	Yes	PHPT60606NY	
				0.5	2	PNP	Yes	PHPT60606PY	
	10	20	200 / 400	0.5	2	NPN	Yes	PHPT60610NY	
				0.5	2	PNP	Yes	PHPT60610PY	
100	2	6	150 / 250	0.5	10	NPN	No	PHPT61002NYC	
			150 / 220	0.5	10	PNP	No	PHPT61002PYC	
			120/220	0.5	10	NPN	No	PHPT61002NYCLH	
			100/180	0.5	10	PNP	No	PHPT61002PYCLH	
	3	8	150 / 250	0.5	10	NPN	Yes	PHPT61003NY	
			150 / 220	0.5	10	PNP	Yes	PHPT61003PY	
	6	12	150 / 250	0.5	10	NPN	Yes	PHPT61006NY	
			150 / 220	0.5	10	PNP	Yes	PHPT61006PY	
	10	20	150 / 250	0.5	10	NPN	Yes	PHPT61010NY	
			150 / 220	0.5	10	PNP	Yes	PHPT61010PY	

## Low VCEsat power transistors double (175oC capable)




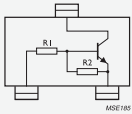
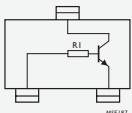
Package											Automotive-qualified	
Size (mm)											LFPAK56D (SOT1205)	
P <sub>tot</sub> (mW)											5 x 6 x 1.1	
V <sub>CE0</sub> (V)	I <sub>C</sub> (A)	I <sub>CM</sub> (A)	h <sub>FE</sub> typ	@ I <sub>C</sub> (A)	@ V <sub>CE</sub> (V)	V <sub>CEsat</sub> typ (mV); I <sub>C</sub> = 0.5 A; I <sub>B</sub> = 0.05 A	V <sub>CEsat</sub> max (mV)	@ I <sub>C</sub> (A)	@ I <sub>B</sub> (A)	Polarity	h <sub>FE1</sub> /h <sub>FE2</sub>	
100	3	6	150	0.5	10	50	300	3	0.2	2XNPN	-	PHPT610030NK
						70	400	3	0.2	2XPNP	-	PHPT610030PK
						50 / 70	300 / 400	3	0.2	NPN/PNP	-	PHPT610030NPK
						50	300	3	0.2	2XNPN	0.95	PHPT610035NK
						70	400	3	0.2	2XPNP	0.9	PHPT610035PK

## RETs 100 mA single




Package					Automotive-qualified				
Size (mm)					SOT23		SOT323 (SC-70)		
P <sub>tot</sub> (mW)					2.9 x 1.3 x 1.0		2.0 x 1.25 x 0.95		
V <sub>CE0</sub> (V)	I <sub>C</sub> (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	250		200		
					NPN	PNP	NPN	PNP	
50	100		1	1					
			2.2	2.2	PDTC123ET	PDTA123ET	PDTC123EU	PDTA123EU	
			4.7	4.7	PDTC143ET	PDTA143ET	PDTC143EU	PDTA143EU	
			10	10	PDTC114ET	PDTA114ET	PDTC114EU	PDTA114EU	
			22	22	PDTC124ET	PDTA124ET	PDTC124EU	PDTA124EU	
			47	47	PDTC144ET	PDTA144ET	PDTC144EU	PDTA144EU	
			100	100	PDTC115ET	PDTA115ET	PDTC115EU	PDTA115EU	
			1	10		PDTA113ZT		PDTA113ZU	
			2.2	10	PDTC123YT	PDTA123YT	PDTC123YU	PDTA123YU	
			2.2	47	PDTC123JT	PDTA123JT	PDTC123JU	PDTA123JU	
			4.7	10	PDTC143XT	PDTA143XT	PDTC143XU	PDTA143XU	
			4.7	47	PDTC143ZT	PDTA143ZT	PDTC143ZU	PDTA143ZU	
			10	47	PDTC114YT	PDTA114YT	PDTC114YU	PDTA114YU	
			22	47	PDTC124XT	PDTA124XT	PDTC124XU	PDTA124XU	
			47	10	PDTC144VT	PDTA144VT	PDTC144VU	PDTA144VU	
		47	22	PDTC144WT	PDTA144WT	PDTC144WU	PDTA144WU		
		2.2	-	PDTC123TT	PDTA123TT	PDTC123TU	PDTA123TU		
		4.7	-	PDTC143TT	PDTA143TT	PDTC143TU	PDTA143TU		
		10	-	PDTC114TT	PDTA114TT	PDTC114TU	PDTA114TU		
		22	-	PDTC124TT	PDTA124TT	PDTC124TU	PDTA124TU		
		47	-	PDTC144TT	PDTA144TT	PDTC144TU	PDTA144TU		
		100	-	PDTC115TT	PDTA115TT	PDTC115TU	PDTA115TU		

# Resistor equipped transistors (RETs)





## RETs 100 mA single - part 2

					Automotive-qualified							
Package					DFN1006-3 (SOT883)	DFN1006B-3 (SOT883B)		DFN1010D-3 (SOT1215)				
												
Size (mm)					1.0 x 0.6 x 0.48		1.0 x 0.6 x 0.37		1.1 x 1.0 x 0.37			
P <sub>tot</sub> (mW)					250		250		750			
V <sub>CE0</sub> (V)	I <sub>c</sub> (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	NPN		PNP		NPN	PNP		
50	100		1	1								
			2.2	2.2	PDTC123EM	PDTA123EM	PDTC123EMB	PDTA123EMB				
			4.7	4.7	PDTC143EM	PDTA143EM	PDTC143EMB	PDTA143EMB	PDTC143EQA	PDTA143EQA		
			10	10	PDTC114EM	PDTA114EM	PDTC114EMB	PDTA114EMB	PDTC114EQA	PDTA114EQA		
			22	22	PDTC124EM	PDTA124EM	PDTC124EMB	PDTA124EMB	PDTC124EQA	PDTA124EQA		
			47	47	PDTC144EM	PDTA144EM	PDTC144EMB	PDTA144EMB	PDTC144EQA	PDTA144EQA		
			100	100	PDTC115EM	PDTA115EM	PDTC115EMB	PDTA115EMB				
			1	10				PDTA113ZM		PDTA113ZMB		
			2.2	10	PDTC123YM	PDTA123YM	PDTC123YMB	PDTA123YMB				
			2.2	47	PDTC123JM	PDTA123JM	PDTC123JMB	PDTA123JMB	PDTC123JQA	PDTA123JQA		
			4.7	10	PDTC143XM	PDTA143XM	PDTC143XMB	PDTA143XMB	PDTC143XQA	PDTA143XQA		
			4.7	47	PDTC143ZM	PDTA143ZM	PDTC143ZMB	PDTA143ZMB	PDTC143ZQA	PDTA143ZQA		
			10	47	PDTC114YM	PDTA114YM	PDTC114YMB	PDTA114YMB	PDTC114YQA	PDTA114YQA		
			22	47	PDTC124XM	PDTA124XM	PDTC124XMB	PDTA124XMB				
			47	10	PDTC144VM	PDTA144VM	PDTC144VMB	PDTA144VMB				
			47	22	PDTC144WM	PDTA144WM	PDTC144WMB	PDTA144WMB				
				2.2	-	PDTC123TM	PDTA123TM	PDTC123TMB	PDTA123TMB			
				4.7	-	PDTC143TM	PDTA143TM	PDTC143TMB	PDTA143TMB			
		10		-	PDTC114TM	PDTA114TM	PDTC114TMB	PDTA114TMB				
		22		-	PDTC124TM	PDTA124TM	PDTC124TMB	PDTA124TMB				
		47		-	PDTC144TM	PDTA144TM	PDTC144TMB	PDTA144TMB				
		100		-	PDTC115TM	PDTA115TM	PDTC115TMB	PDTA115TMB				

## RETs 100 mA double




					Automotive-qualified										
Package					DFN1010B-6 (SOT1216)	DFN1412-6 (SOT1268)			SOT363 (SC-88)						
															
Size (mm)					1.1 x 1.0 x 0.37			1.4 X 1.2 X 0.5			2.0 x 1.25 x 0.95				
P <sub>tot</sub> (mW)					350			480			300				
V <sub>CE0</sub> (V)	I <sub>c</sub> (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	NPN / NPN	NPN / PNP	PNP / PNP	NPN / NPN	NPN / PNP	PNP / PNP	NPN / NPN	NPN / PNP	PNP / PNP		
50	100	R1 = R2	2.2	2.2								PUMH20	PUMD20	PUMB20	
			4.7	4.7								PUMH15	PUMD15	PUMB15	
			10	10	PQMH11	PQMD3	PQMB11	PRMH11	PRMD3	PRMB11	PUMH11	PUMD3	PUMB11		
			22	22		PQMD2			PRMD2		PUMH1	PUMD2	PUMB1		
			47	47	PQMH2	PQMD12		PRMH2	PRMD12		PUMH2	PUMD12	PUMB2		
			100	100							PUMH24	PUMD24	PUMB24		
		R1 ≠ R2	2.2	47	PQMH10	PQMD10		PRMH10	PRMD10		PUMH10	PUMD10	PUMB10		
			4.7	10							PUMH18	PUMD18	PUMB18		
			4.7	47	PQMH13	PQMD13		PRMH13	PRMD13		PUMH13	PUMD13	PUMB13		
			10	47	PQMH9			PRMH9			PUMH9	PUMD9	PUMB9		
			22	47		PQMD16			PRMD16		PUMH16	PUMD16	PUMB16		
			47	22							PUMH17	PUMD17	PUMB17		
		47 / 2.2	47 / 47										PUMD48		
		Only R1	2.2	-									PUMH30	PUMD30	PUMB30
			4.7	-									PUMH7	PUMD6	PUMB3
			10	-									PUMH4	PUMD4	PUMB4
			22	-									PUMH19	PUMD19	PUMB19
			47	-									PUMH14	PUMD14	PUMB14

## RETs 500 mA single / double

					Automotive-qualified							
Package					SOT457 (SC-74)		SOT23		SOT323 (SC-70)		DFN1010D-3 (SOT1215)	
												
Size (mm)					2.9 x 1.5 x 1.0		2.9 x 1.3 x 1.0		2.0 x 1.25 x 0.95		1.1 x 1.0 x 0.37	
P <sub>tot</sub> (mW)					750		250		200		750	
V <sub>CE0</sub> (V)	I <sub>C</sub> (mA)	Configuration	R1 (kΩ)	R2 (kΩ)	NPN / NPN	NPN / PNP	NPN	PNP	NPN	PNP	NPN	PNP
50	500	R1 = R2	1	1			PDTD113ET	PDTB113ET	PDTD113EU	PDTB113EU	PDTD113EQA	PDTB113EQA
			2.2	2.2			PDTD123ET	PDTB123ET	PDTD123EU	PDTB123EU	PDTD123EQA	PDTB123EQA
			4.7	4.7			PDTD143ET	PDTB143ET	PDTD143EU	PDTB143EU	PDTD143EQA	PDTB143EQA
			10	10			PDTD114ET	PDTB114ET	PDTD114EU	PDTB114EU	PDTD114EQA	PDTB114EQA
		R1 ≠ R2	1	10	PIMN31	PIMC31	PDTD113ZT	PDTB113ZT	PDTD113ZU	PDTB113ZU	PDTD113ZQA	PDTB113ZQA
			2.2	10			PDTD123YT	PDTB123YT	PDTD123YU	PDTB123YU	PDTD123YQA	PDTB123YQA
			4.7	10			PDTD143XT	PDTB143XT	PDTD143XU	PDTB143XU	PDTD143XQA	PDTB143XQA
		Only R1	2.2	-			PDTD123TT	PDTB123TT				

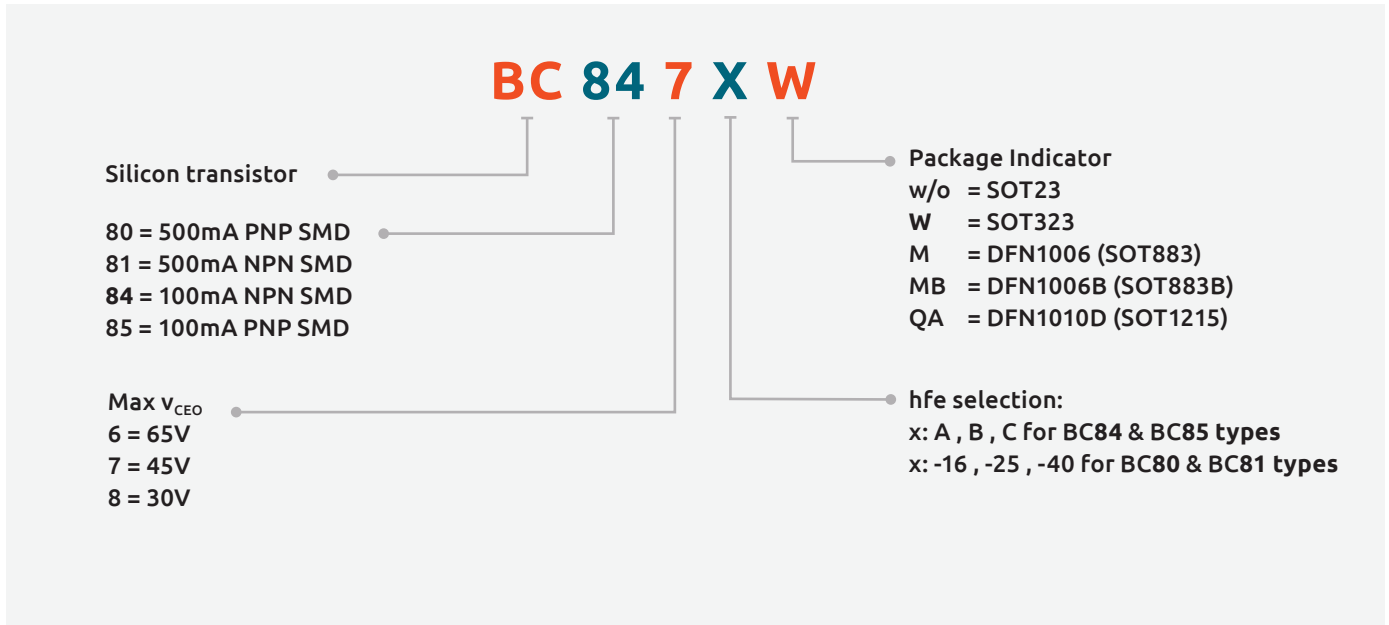
## 3-terminal adjustable shunt regulators

Types in **bold red** are in development

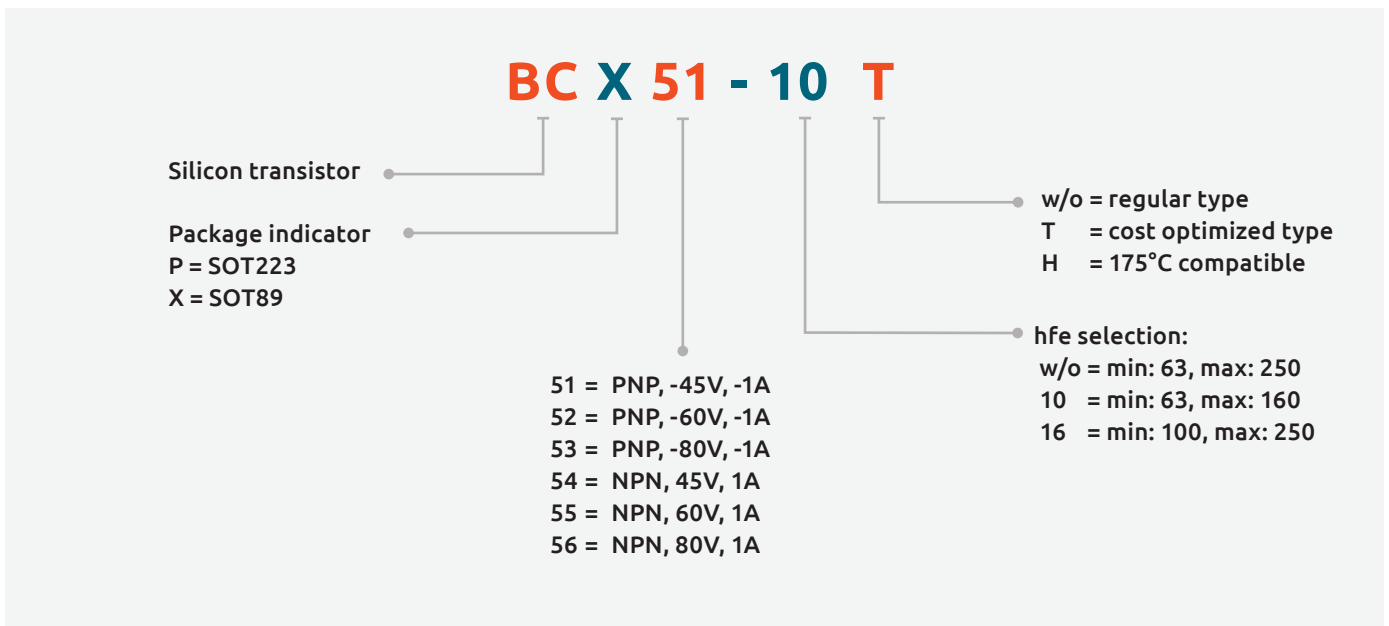
Automotive-qualified											
Type name	Pinning configuration	T <sub>amb</sub> (C°)	V <sub>ref</sub>		Package	Size(mm)	P <sub>tot</sub> (mW)	V <sub>KA</sub> (V)	I <sub>K</sub> (mA)		
<b>TLVH431NCDBZR</b>	Normal pinning	0 to 70	1.5%	1.24		2.9 x 1.3 x 1.0	480	20	80		
<b>TLVH431NIDBZR</b>	Normal pinning	-40 to 85									
<b>TLVH431NQDBZR</b>	Normal pinning	-40 to 125									
<b>TLVH431NMQDBZR</b>	MIRrored pinning	-40 to 125									
<b>TLVH431NACDBZR</b>	Normal pinning	0 to 70	1%	2.495							
<b>TLVH431NAIDBZR</b>	Normal pinning	-40 to 85									
<b>TLVH431NAQDBZR</b>	Normal pinning	-40 to 125									
<b>TLVH431NAMQDBZR</b>	MIRrored pinning	-40 to 125									
TL431CDBZR	Normal pinning	0 to 70	2%	2.495				2.9 x 1.3 x 1.0	580	36	100
TL431IDBZR	Normal pinning	-40 to 85									
TL431QDBZR	Normal pinning	-40 to 125									
TL431FDT	Normal pinning	-40 to 125									
TL431MFD	MIRrored pinning	-40 to 125									
TL431ACDBZR	Normal pinning	0 to 70	0.5%	2.495							
TL431AIDBZR	Normal pinning	-40 to 85									
TL431AQDBZR	Normal pinning	-40 to 125									
TL431AFDT	Normal pinning	-40 to 125									
TL431AMFD	MIRrored pinning	-40 to 125									
TL431BCDBZR	Normal pinning	0 to 70	0.5%	2.495		2.9 x 1.3 x 1.0	580	36	100		
TL431BIDBZR	Normal pinning	-40 to 85									
TL431BQDBZR	Normal pinning	-40 to 125									
TL431BFDT	Normal pinning	-40 to 125									
TL431BMFD	MIRrored pinning	-40 to 125									

## Nomenclature

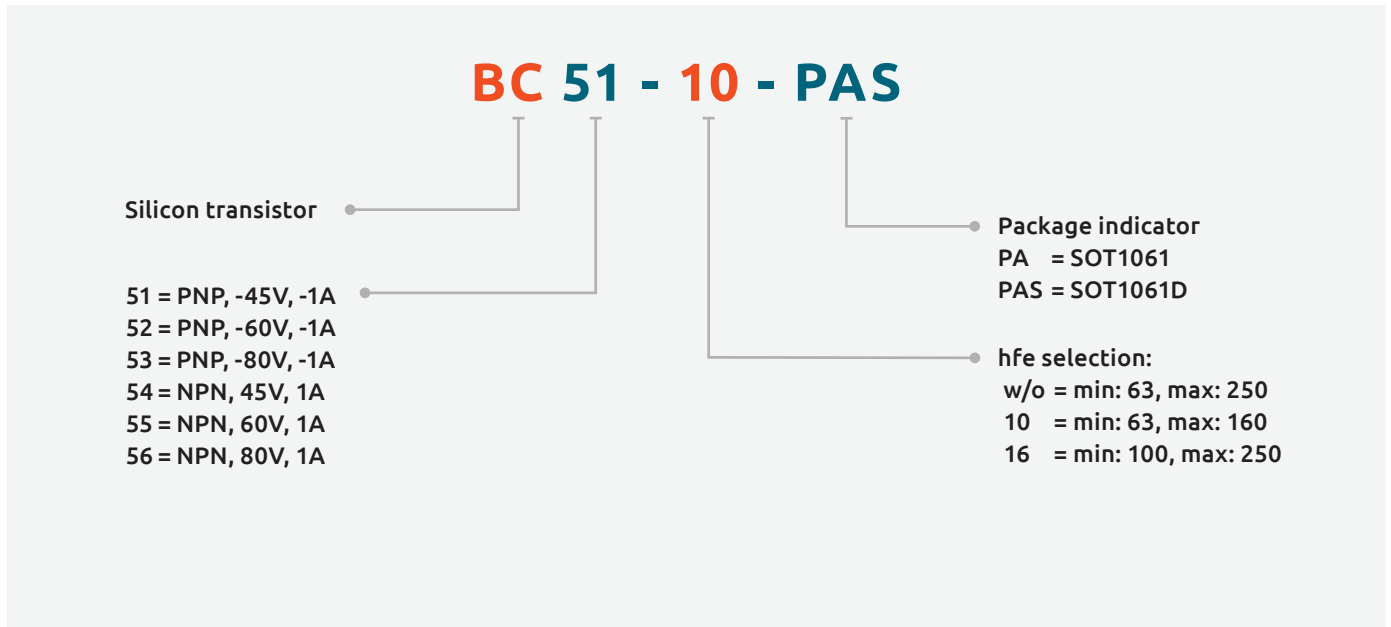
### General purpose bipolar transistors



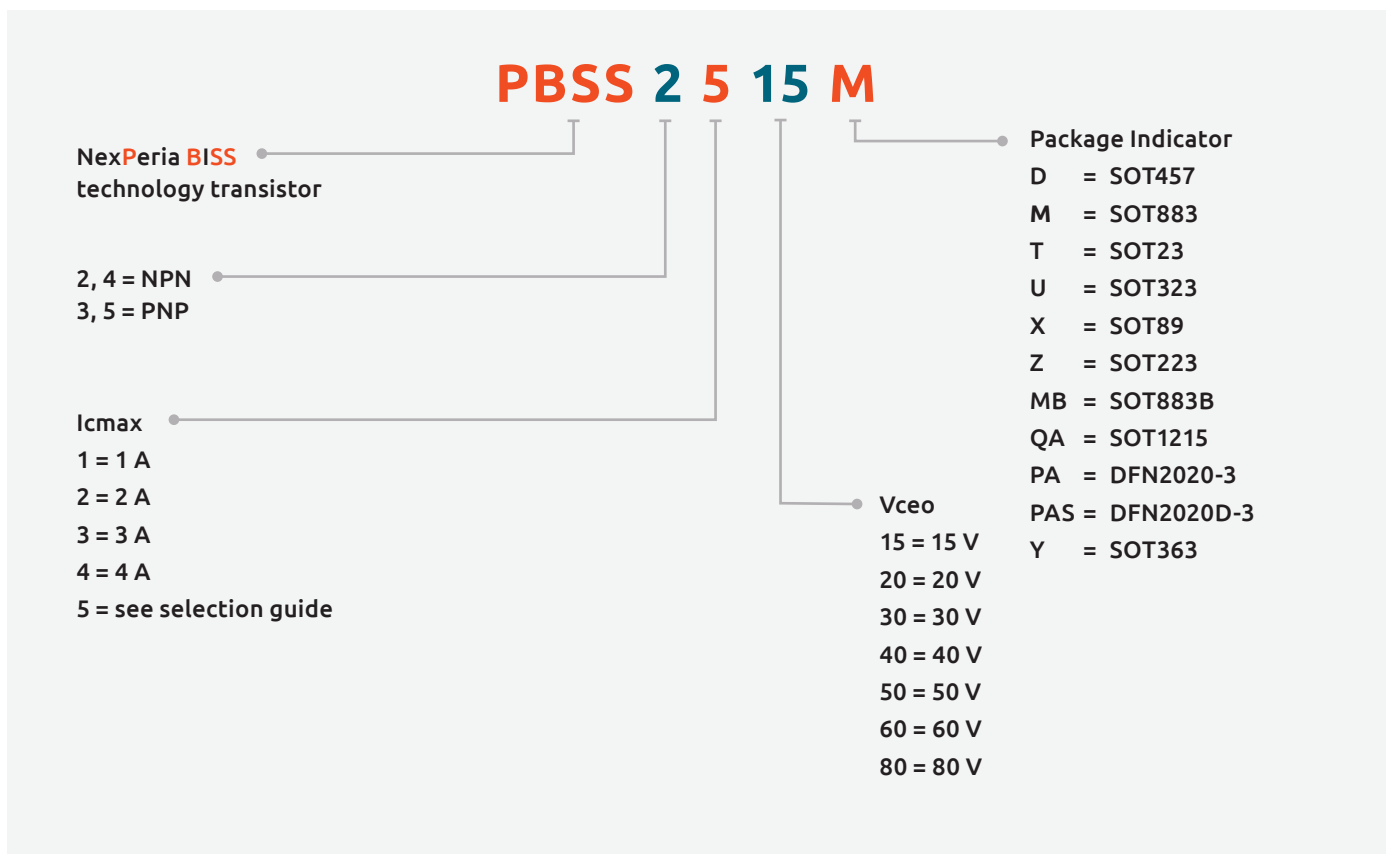
### General purpose power transistors



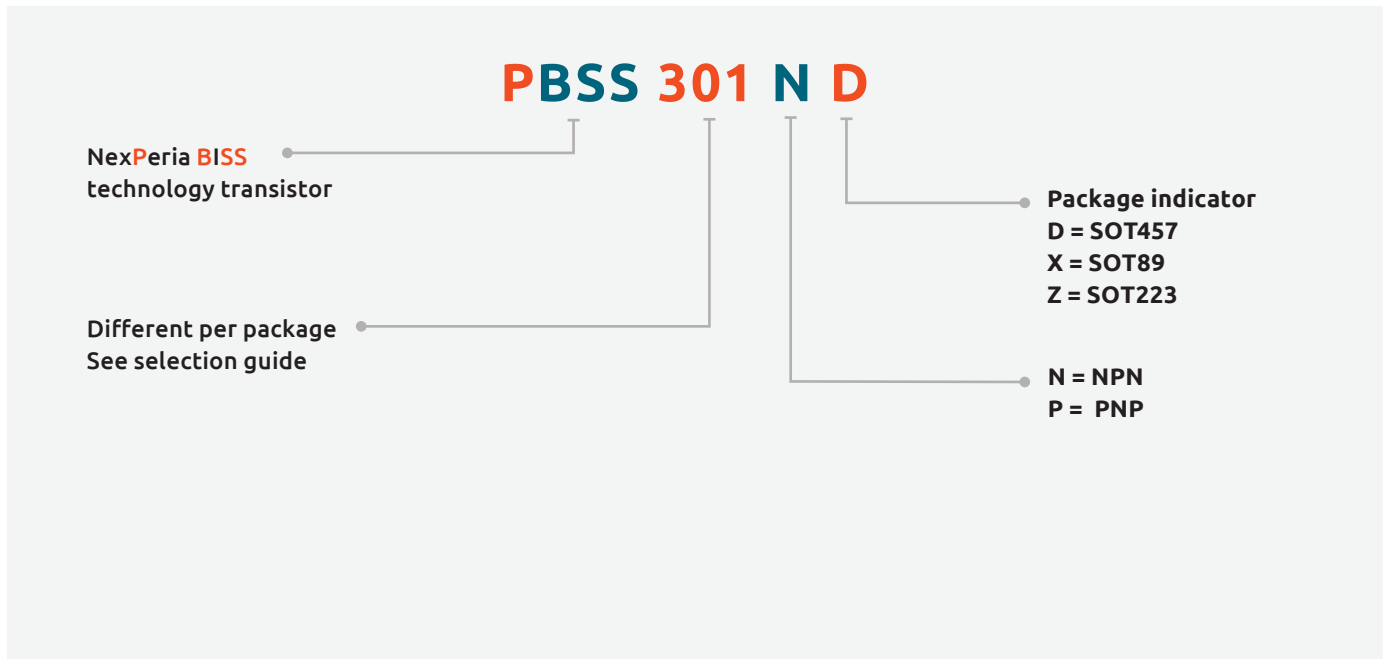
## General purpose power transistors



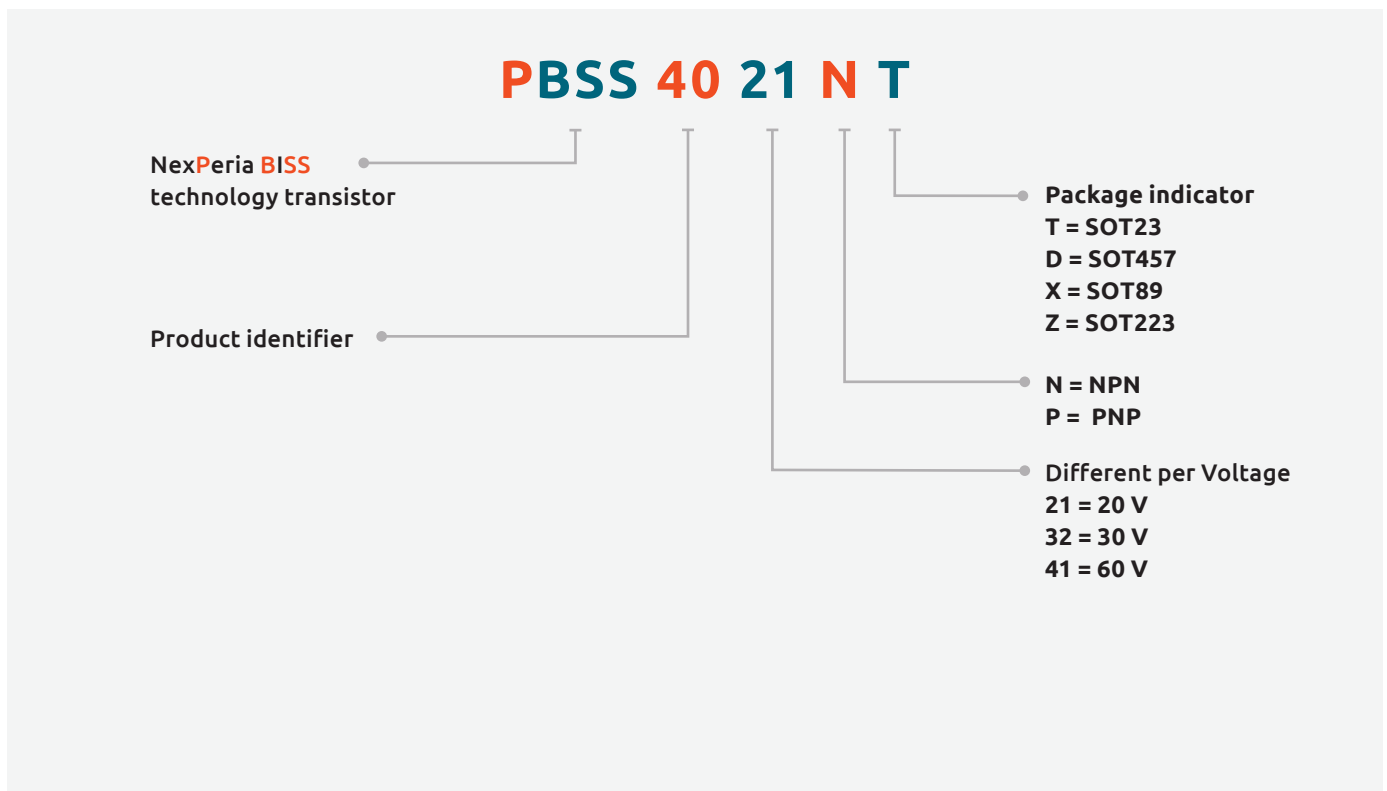
## Low VCEsat transistors



## 3rd generation Low VCEsat transistors

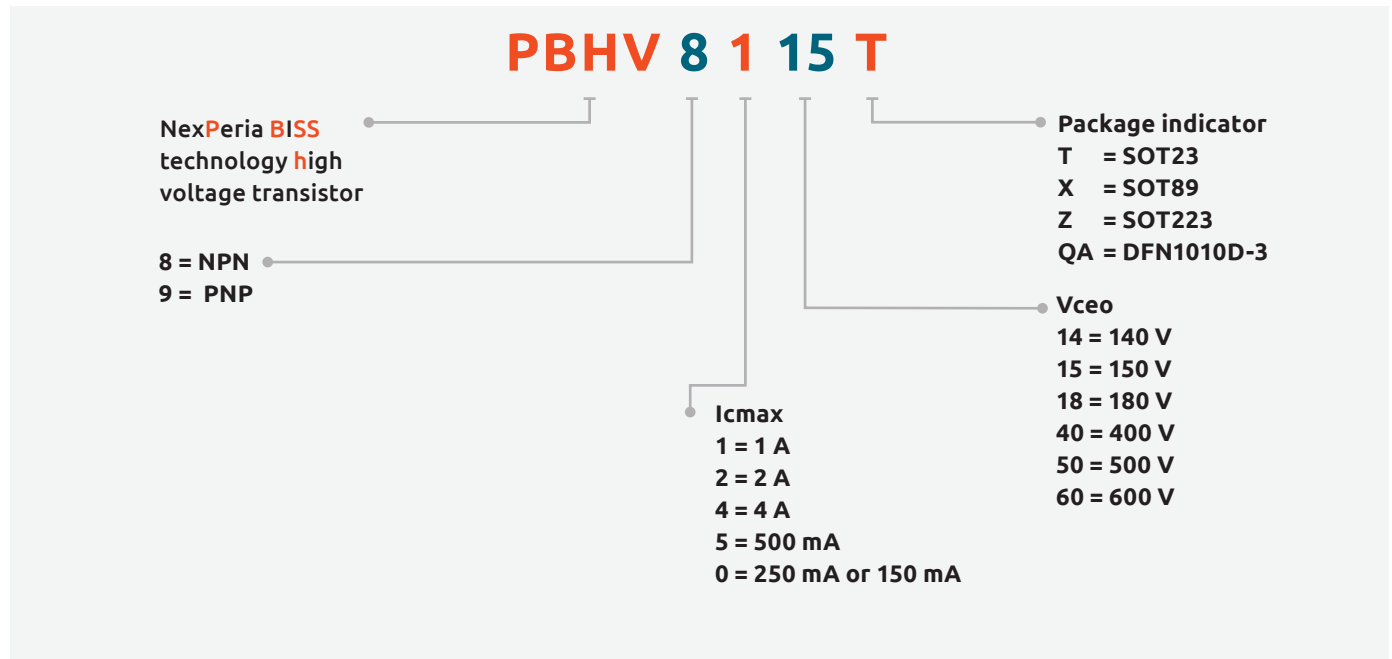


## 4th generation Low VCEsat transistors

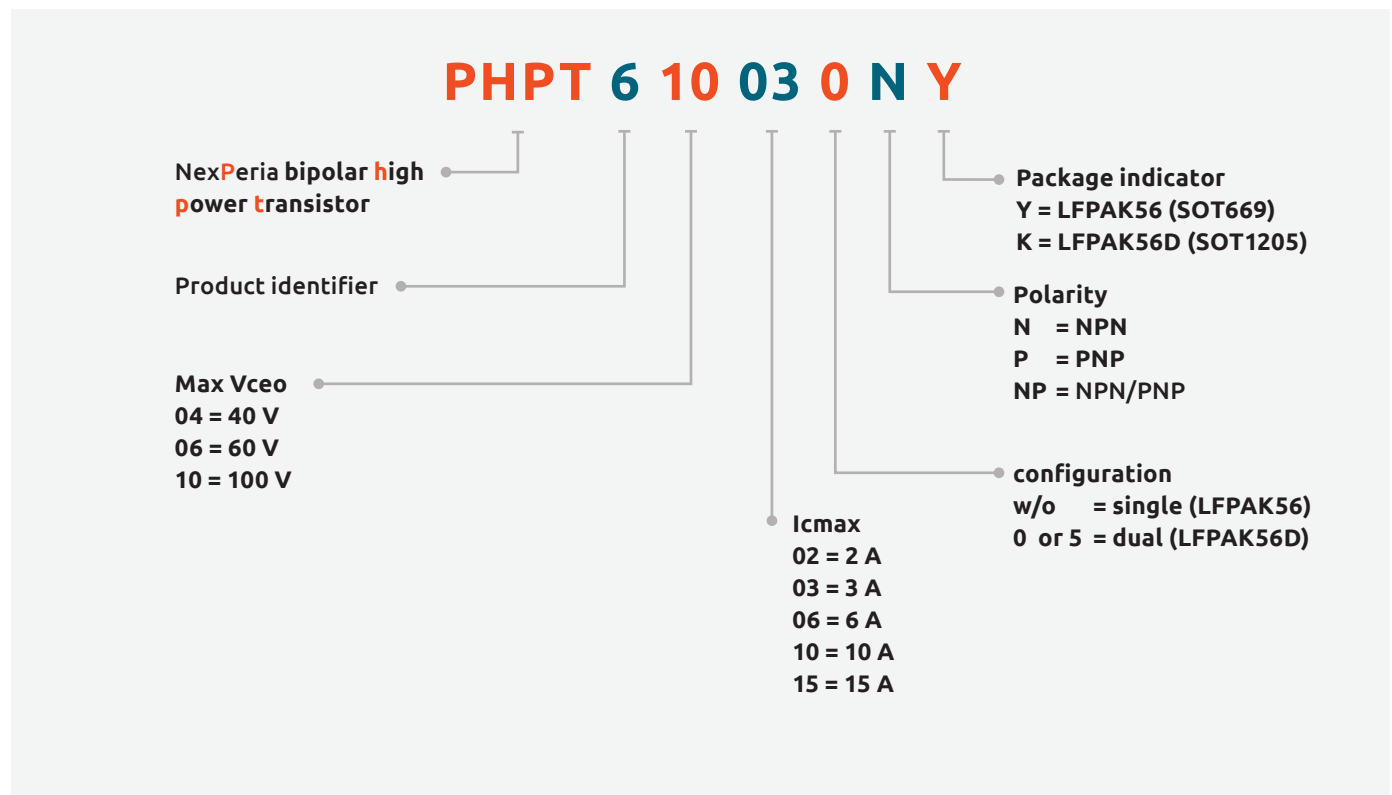




## High-voltage Low VCEsat transistors



## Transistors in a LFPAK SMD package





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General purpose Zener diodes

Types in **bold** represent new products

$I_F$ max (mA)	$P_{ZSM}$ (W)	$V_Z$ nom (V)	$V_Z$ tolerance	Note	Configuration	Series	Package	Automotive-qualified	Size (mm)	$P_{tot}$ (mW)
500	-	3.3~24	C	Europe	Single	1N47xxA series	SOD66 (DO-41)	No	4.8 x 2.6 x 0.81	1000
	60	3.6~75				BZX85 series				
250	-	2.1~36	About 2%	Special	Single	NZX series	SOD27 (DO-35)	No	4.25 x 1.85 x 0.56	400
	40	2.4~75	B, C	Europe		BZX79 series				
400	40	2.4~75	C	Europe	Single	BZV90 series	SOT223 (SC-73)	Yes	6.5 x 3.5 x 1.65	1500
250	40	2.4~75	C	Europe	Single	BZV49 series	SOT89 (SC-62)	Yes	4.5 x 2.5 x 1.5	1000
250	40	2.4~75	B, C	Europe	Single	BZV55 series	SOD80C (MiniMelf)	No	3.5 x 1.5 x 1.5	400
200	40	2.4~75	B, C	Europe	Dual c.a.	BZB84 series	SOT23	Yes	2.9 x 1.3 x 1.0	250
			A, B, C		Single	BZX84 series				
250	30	5~6.8	0.2 V	Ave	Single	PLVA600A series				
250	40	2.4~75	B, C	Europe	Single	BZT52 series	SOD123	Yes	2.7 x 1.6 x 1.2	550
200		2.4~36	B	Japan		PDZ-GW series				
250	-	3.0~30	About 2.5%	Special	Single	NZH series	SOD123F	Yes	2.6 x 1.6 x 1.1	830
	40	2.4~75	B, C	Europe		BZT52H series				
200	40	10	B2	Japan	Dual isolated	PZU10DB2 series	SOT353 (SC-88A)	Yes	2.0 x 1.25 x 0.95	300
200	40	2.4~15	C	Europe	Dual c.a.	BZB784 series	SOT323 (SC-70)	Yes	2.0 x 1.25 x 0.95	350
200	40	2.4~75	B, C	Europe	Single	BZX84W series				
200	30	100	C	Europe	Back-to-back	BZB100A	SOD323 (SC-76)	Yes	1.7 x 1.25 x 0.95	300
	40	2.4~36	B2	Japan	Single	PDZ-B series				
250	40	2.4~75	B, C	Europe		Single	BZX384 series			
200	40	2.4~36	B, B1, B2, B3	Japan		PZUxBA series				
200	60	100	C	Europe		BZX100A	SOD323F (SC-90)	Yes	1.7 x 1.25 x 0.7	550
200	40	2.4~36	B, B1, B2, B3	Japan	Single	PZUxB series				
250	40	2.4~75	B, C	Europe		BZX84J series				
200	40	2.4~75	B, C	Europe	Single	BZX585 series	SOD523 (SC-79)	Yes	1.2 x 0.8 x 0.6	300
200	40	2.4~75	B, C	Europe	Single	BZX884 series	DFN1006-2 (SOD882)	Yes	1.0 x 0.6 x 0.48	250
		2.4~36	B, B2	Japan		PZUxBL series				
200	40	2.4~75	B, C	Europe	Single	<b>BZX884S</b> series	DFN1006BD-2 (SOD882BD)	Yes	1.0 x 0.6 x 0.47	250
250	40	2.4~30	B	Europe	Single	TDZxJ series	SOD323F	Yes	1.7 x 1.25 x 0.7	500

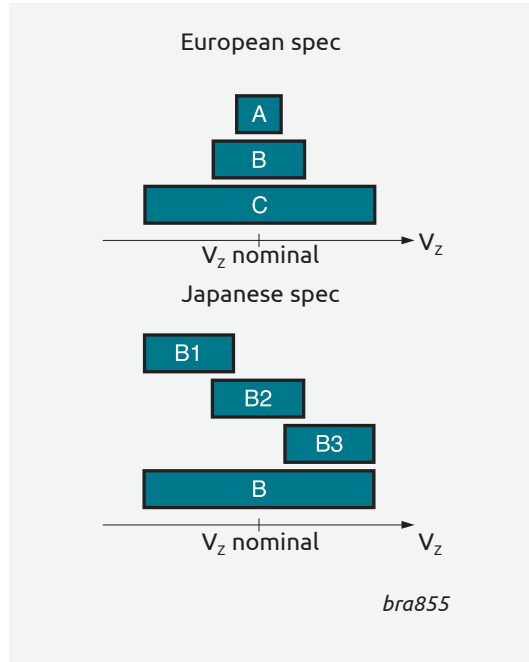
Notes:

Japan: B selection: app. 5%  $V_Z$  tolerance, B1, B2, B3 selections: app. 2%  $V_Z$  tolerance in sequential intervals  
 Europe: A selection: app. 1%  $V_Z$  tolerance, B selection: app. 2%  $V_Z$  tolerance, C selection: app. 5%  $V_Z$  tolerance;  
 the selections are in overlapping intervals

Ave: low-voltage avalanche regulator diodes  
 Dual c.a.: dual common anode

# Zener diodes specifications

## Differences in Zener specifications



## Japanese spec (PZU, PDZ)

y =	B-series	B1-series	B2-series	B3-series
	$\pm 5\%$	$\pm 2\%$	$\pm 2\%$	$\pm 2\%$
	$V_z$ (V)	$V_z$ (V)	$V_z$ (V)	$V_z$ (V)
PZU2.4y	2.3 - 2.6	-	-	-
PZU2.7y	2.5 - 2.9	2.5 - 2.75	2.65 - 2.9	-
PZU3.0y	2.8 - 3.2	2.8 - 3.05	2.95 - 3.2	-
PZU3.3y	3.1 - 3.5	3.1 - 3.35	3.25 - 3.5	-
PZU3.6y	3.4 - 3.8	3.4 - 3.65	3.55 - 3.8	-
PZU3.9y	3.7 - 4.1	3.7 - 3.97	3.87 - 4.1	-
PZU4.3y	4.01 - 4.48	4.01 - 4.21	4.15 - 4.34	4.28 - 4.48
PZU4.7y	4.42 - 4.9	4.42 - 4.61	4.55 - 4.75	4.69 - 4.9
PZU5.1y	4.84 - 5.37	4.84 - 5.04	4.98 - 5.2	5.14 - 5.37
PZU5.6y	5.31 - 5.92	5.31 - 5.55	5.49 - 5.73	5.67 - 5.92
PZU6.2y	5.86 - 6.53	5.86 - 6.12	6.06 - 6.33	6.26 - 6.53
PZU6.8y	6.47 - 7.14	6.47 - 6.73	6.65 - 6.93	6.86 - 7.14
PZU7.5y	7.06 - 7.84	7.06 - 7.36	7.28 - 7.6	7.52 - 7.84
PZU8.2y	7.76 - 8.64	7.76 - 8.1	8.02 - 8.36	8.28 - 8.64
PZU9.1y	8.56 - 9.55	8.56 - 8.93	8.85 - 9.23	9.15 - 9.55
PZU10y	9.45 - 10.55	9.45 - 9.87	9.77 - 10.21	10.11 - 10.55
PZU11y	10.44 - 11.56	10.44 - 10.88	10.76 - 11.22	11.1 - 11.56
PZU12y	11.42 - 12.6	11.42 - 11.9	11.74 - 12.24	12.08 - 12.6
PZU13y	12.47 - 13.96	12.47 - 13.03	12.91 - 13.49	13.37 - 13.96
PZU14y	-	-	13.7 - 14.3	-
PZU15y	13.84 - 15.52	13.84 - 14.46	14.34 - 14.98	14.85 - 15.52
PZU16y	15.37 - 17.09	15.37 - 16.01	15.85 - 16.51	16.35 - 17.09
PZU18y	16.94 - 19.03	16.94 - 17.7	17.56 - 18.35	18.21 - 19.03
PZU20y	18.86 - 21.08	18.86 - 19.7	19.52 - 20.39	20.21 - 21.08
PZU22y	20.88 - 23.17	20.88 - 21.77	21.54 - 22.47	22.23 - 23.17
PZU24y	22.93 - 25.57	22.93 - 23.96	23.72 - 24.78	24.54 - 25.57
PZU27y	25.1 - 28.9	-	-	-
PZU30y	28 - 32	-	-	-
PZU33y	31 - 35	-	-	-
PZU36y	34 - 38	-	-	-

Diodes

## European spec (BZV, BZX, BZB, 1N47)




















y =	C-series	B-series	A-series
	$\pm 5\%$	$\pm 2\%$	$\pm 1\%$
	$V_z$ (V)	$V_z$ (V)	$V_z$ (V)
BZX84-y2V4	2.2 - 2.6	2.35 - 2.45	2.37 - 2.43
BZX84-y2V7	2.5 - 2.9	2.65 - 2.75	2.67 - 2.73
BZX84-y3V0	2.8 - 3.2	2.94 - 3.06	2.97 - 3.03
BZX84-y3V3	3.1 - 3.5	3.23 - 3.37	3.26 - 3.34
BZX84-y3V6	3.4 - 3.8	3.53 - 3.67	3.56 - 3.64
BZX84-y3V9	3.7 - 4.1	3.82 - 3.98	3.86 - 3.94
BZX84-y4V3	4 - 4.6	4.21 - 4.39	4.25 - 4.35
BZX84-y4V7	4.4 - 5	4.61 - 4.79	4.65 - 4.75
BZX84-y5V1	4.8 - 5.4	5 - 5.2	5.04 - 5.16
BZX84-y5V6	5.2 - 6	5.49 - 5.71	5.54 - 5.66
BZX84-y6V2	5.8 - 6.6	6.08 - 6.32	6.13 - 6.27
BZX84-y6V8	6.4 - 7.2	6.66 - 6.94	6.73 - 6.87
BZX84-y7V5	7 - 7.9	7.35 - 7.65	7.42 - 7.58
BZX84-y8V2	7.7 - 8.7	8.04 - 8.36	8.11 - 8.29
BZX84-y9V1	8.5 - 9.6	8.92 - 9.28	9 - 9.2
BZX84-y10	9.4 - 10.6	9.8 - 10.2	9.9 - 10.1
BZX84-y11	10.4 - 11.6	10.8 - 11.2	10.8 - 11.11
BZX84-y12	11.4 - 12.7	11.8 - 12.2	11.88 - 12.12
BZX84-y13	12.4 - 14.1	12.7 - 13.3	12.87 - 13.13
BZX84-y15	13.8 - 15.6	14.7 - 15.3	14.85 - 15.15
BZX84-y16	15.3 - 17.1	15.7 - 16.3	15.84 - 16.16
BZX84-y18	16.8 - 19.1	17.6 - 18.4	17.82 - 18.18
BZX84-y20	18.8 - 21.2	19.6 - 20.4	19.8 - 20.2
BZX84-y22	20.8 - 23.3	21.6 - 22.4	21.78 - 22.22
BZX84-y24	22.8 - 25.6	23.5 - 24.5	23.76 - 24.24
BZX84-y27	25.1 - 28.9	26.5 - 27.5	26.73 - 27.27
BZX84-y30	28 - 32	29.4 - 30.6	29.70 - 30.30
BZX84-y33	31 - 35	32.3 - 33.7	32.67 - 33.33
BZX84-y36	34 - 38	35.3 - 36.7	35.64 - 36.36
BZX84-y39	37 - 41	38.2 - 39.8	38.61 - 39.39
BZX84-y43	40 - 46	42.1 - 43.9	42.57 - 43.43
BZX84-y47	44 - 50	46.1 - 47.9	-
BZX84-y51	48 - 54	50 - 52	50.49 - 51.51
BZX84-y56	52 - 60	54.9 - 57.1	-
BZX84-y62	58 - 66	60.8 - 63.2	-
BZX84-y68	64 - 72	66.6 - 69.4	-
BZX84-y75	70 - 79	73.5 - 76.5	74.25 - 75.75

## NZX-series in SOD27
















	$V_z$ (V)		$V_z$ (V)		$V_z$ (V)
NZX2V1B	2.0 - 2.2	NZX6V2D	6.1 - 6.4	NZX14C	13.8 - 14.3
NZX2V4A	2.3 - 2.5	NZX6V2E	6.3 - 6.6	NZX15A	14.1 - 14.7
NZX2V4B	2.4 - 2.6	NZX6V8A	6.4 - 6.7	NZX15B	14.5 - 15.1
NZX2V7A	2.5 - 2.7	NZX6V8B	6.6 - 6.9	NZX15C	14.9 - 15.5
NZX2V7B	2.6 - 2.8	NZX6V8C	6.7 - 7	NZX15X	14.35 - 15.09
NZX2V7C	2.7 - 2.9	NZX6V8D	6.9 - 7.2	NZX16A	15.3 - 15.9
NZX3V0A	2.8 - 3	NZX7V5A	7 - 7.3	NZX16B	15.7 - 16.5
NZX3V0B	2.9 - 3.1	NZX7V5B	7.2 - 7.6	NZX16C	16.3 - 17.1
NZX3V0C	3 - 3.2	NZX7V5C	7.3 - 7.7	NZX18A	16.9 - 17.7
NZX3V3A	3.1 - 3.3	NZX7V5D	7.5 - 7.9	NZX18B	17.5 - 18.3
NZX3V3B	3.2 - 3.4	NZX7V5X	7.07 - 7.45	NZX18C	18.1 - 19
NZX3V3C	3.3 - 3.5	NZX8V2A	7.7 - 8.1	NZX20A	18.8 - 19.7
NZX3V6A	3.4 - 3.6	NZX8V2B	7.9 - 8.3	NZX20B	19.5 - 20.4
NZX3V6B	3.5 - 3.7	NZX8V2C	8.1 - 8.5	NZX20C	20.2 - 21.2
NZX3V6C	3.6 - 3.8	NZX8V2D	8.3 - 8.7	NZX22A	20.9 - 21.9
NZX3V9A	3.7 - 3.9	NZX9V1A	8.5 - 8.9	NZX22B	21.6 - 22.6
NZX3V9B	3.8 - 4	NZX9V1B	8.7 - 9.1	NZX22C	22.3 - 23.3
NZX3V9C	3.9 - 4.1	NZX9V1C	8.9 - 9.3	NZX24A	22.9 - 24
NZX4V3A	4 - 4.2	NZX9V1D	9.1 - 9.5	NZX24B	23.6 - 24.7
NZX4V3B	4.1 - 4.3	NZX9V1E	9.3 - 9.7	NZX24C	24.3 - 25.5
NZX4V3C	4.2 - 4.4	NZX10A	9.5 - 9.9	NZX24X	22.61 - 23.77
NZX4V3D	4.3 - 4.5	NZX10B	9.7 - 10.1	NZX27A	25.2 - 26.6
NZX4V7A	4.4 - 4.6	NZX10C	9.9 - 10.3	NZX27B	26.2 - 27.6
NZX4V7B	4.5 - 4.7	NZX10D	10.2 - 10.6	NZX27C	27.2 - 28.6
NZX4V7C	4.6 - 4.8	NZX11A	10.4 - 10.8	NZX27X	26.99 - 28.39
NZX4V7D	4.7 - 4.9	NZX11B	10.7 - 11.1	NZX30A	28.2 - 29.6
NZX5V1A	4.8 - 5	NZX11C	10.9 - 11.3	NZX30B	29.2 - 30.6
NZX5V1B	4.9 - 5.1	NZX11D	11.1 - 11.6	NZX30C	30.2 - 31.6
NZX5V1C	5 - 5.2	NZX12A	11.4 - 11.9	NZX30X	29.02 - 30.51
NZX5V1D	5.1 - 5.3	NZX12B	11.6 - 12.1	NZX33A	31.2 - 32.6
NZX5V6A	5.2 - 5.5	NZX12C	11.9 - 12.4	NZX33B	32.2 - 33.6
NZX5V6B	5.3 - 5.6	NZX12D	12.2 - 12.7	NZX33C	33.2 - 34.5
NZX5V6C	5.4 - 5.7	NZX12X	11.44 - 12.03	NZX36A	34.2 - 35.7
NZX5V6D	5.5 - 5.8	NZX13A	12.4 - 12.9	NZX36B	35.3 - 36.8
NZX5V6E	5.6 - 5.9	NZX13B	12.6 - 13.1	NZX36C	36.4 - 38
NZX6V2A	5.7 - 6	NZX13C	12.9 - 13.4	NZX36X	35.36 - 37.19
NZX6V2B	5.8 - 6.1	NZX14A	13.2 - 13.7		
NZX6V2C	6 - 6.3	NZX14B	13.5 - 14		

## Switching diodes

### General purpose, high speed switching diodes <= 90V
















$V_R$ max (V)	$V_F$ max (V)	$I_F$ (mA)	$I_R$ max (mA)	$V_R$ (V)	$t_{rr}$ max (ns)	Package	Automotive-qualified							
							SOD80C (MiniMelf)	SOT23	SOT143B	SOT323 (SC-70)	SOT363 (SC-88)	DFN1412-6 (SOT1268)	DFN1010D-3 (SOT1215)	DFN1006-3 (SOT883)
														
							Size (mm)	3.5 x 1.5 x 1.5	2.9 x 1.3 x 1.0	2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.4 x 1.2 x 0.5	1.1 x 1.0 x 0.37
$P_{tot}$ (mW)	<b>400</b>	<b>250</b>	<b>250</b>	<b>200</b>	<b>350</b>	<b>480</b>	<b>325</b>	<b>250</b>						
50	1	50	100	50	4			BAL74						
								BAV74						
70	1	50	1000	70	4			BAL99						
75	1	50	1000	75	4				BAS28					
		100	5000	75	4		BAS32L							
80	1	50	500	80	4				1PS300					
									1PS301					
									1PS302					
90	1	50	500	80	4			BAW56		BAW56W		BAW56QA	BAW56M	
										BAW56S	BAW56SRA			
										BAW756S				

## General purpose, high speed switching diodes 100V (Leaded SMD)

$V_R$ max (V)	$V_F$ max (V)	@ $I_F$ (mA)	$I_R$ max (nA)	@ $V_R$ (V)	$t_{rr}$ max (ns)	Package	Automotive-qualified							
							SOT23	SOD123	SOD123F	SOT323 (SC-70)	SOT363 (SC-88)	SOD323 (SC-76)	SOD323F (SC-90)	SOD523 (SC-79)
100	1	50	500	80	4									
						Size (mm)	2.9 x 1.3 x 1.0	2.7 x 1.6 x 1.2	2.6 x 1.6 x 1.1	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.7 x 1.25 x 0.95	1.7 x 1.25 x 0.7	1.2 x 0.8 x 0.6
						$P_{tot}$ (mW)	<b>250</b>	<b>380</b>	<b>375</b>	<b>200</b>	<b>300</b>	<b>300</b>	<b>300</b>	<b>250</b>
								BAS16GW	BAS16H			BAS316	BAS16J	BAS516
							BAS16			BAS16W				
											BAS16VY			
							BAV70			BAV70W				
											BAV70S			
							BAV99			BAV99W				
											BAV99S			

## General purpose, high speed switching diodes 100V (Leadless DFN)
































Types in **bold** represent new products

$V_R$ max (V)	$V_F$ max (V)	@ $I_F$ (mA)	$I_R$ max (nA)	@ $V_R$ (V)	$t_{rr}$ max (ns)	Package	Automotive-qualified							
							DFN1412-6 (SOT1268)	DFN1010D-3 (SOT1215)	DFN1006-2 (SOD882)	DFN1006-3 (SOT883)	DFN1006D-2 (SOD882D)	DFN1006BD-2 (SOD882BD)	DFN1110D-3 (SOT8015)	DFN1412D-3 (SOT8009)
100	1	50	500	80	4									
						Size (mm)	1.4 x 1.2 x 0.5	1.1 x 1.0 x 0.37	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37	1.0 x 0.6 x 0.48	1.1 x 1.0 x 0.47	1.4 x 1.2 x 0.47
						$P_{tot}$ (mW)	<b>480</b>	<b>325</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>250</b>		
									BAS16L		BAS16LD	BAS16LS		
								BAS16QA					<b>BAS16QB</b>	<b>BAS16QC</b>
														
								BAV70QA		BAV70M				
							BAV70SRA							
								BAV99QA						
														

# Switching diodes



## General purpose, switching diodes >= 100V

Types in **bold** represent new products

							Automotive-qualified															
$V_R$ max (V)	$V_F$ max (V)	@ $I_F$ (mA)	$I_R$ max (nA)	@ $V_R$ (V)	$t_{rr}$ max (ns)	Package	SOD80C (MiniMelf)	SOT457 (SC-74)	SOT23	SOT143B	SOD123	SOD123F	SOT323 (SC-70)	SOT353 (SC-88A)	SOT363 (SC-88)	SOD323 (SC-76)	SOD323F (SC-90)	SOD523 (SC-79)	DFN1006D-2 (SOD882(D))	DFN1010D-3 (SOT1215)		
																						
							Size (mm)	3.5 x 1.5 x 1.5	2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0	2.9 x 1.3 x 1.0	2.7 x 1.6 x 1.2	2.6 x 1.6 x 1.1	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.7 x 1.25 x 0.95	1.7 x 1.25 x 0.7	1.2 x 0.8 x 0.6	1.0 x 0.6 x 0.48 (1.0 x 0.6 x 0.37)	1.1 x 1.0 x 0.37	
							$P_{tot}$ (mW)	<b>400</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>380</b>	<b>375</b>	<b>200</b>	<b>255</b>	<b>300</b>	<b>300</b>	<b>300</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>325</b>
100	1	100	100	100	50				BAS19													
150	1	100	100	150	50		BAV102															
									BAS20													
				150	50		BAV103				BAS21GW	BAS21H				BAS321	BAS321J	<b>BAS521B</b>	BAS21LL (LD)	<b>BAV21QA</b>		
									BAS21				BAS21W									
										BAS23												
														BAS21PG								
200	1	100	100	200	50				BAS23A				BAS21AW									
									BAS23C													<b>BAV23QA</b>
									BAS23S				BAS21SW									
								BA-S21AVD														
								BAS21VD														
																	BAS21J	BAS521				
300	1.1	100	150	250	50				BAS101													
									BAS101S													
										BAS101												
															BAS101S							

## High performance switching diodes (175°C capable & superior power dissipation)

Types in **bold** represent new products

							Automotive-qualified	
$V_R$ max (V)	$V_F$ max (V)	@ $I_F$ (mA)	$I_R$ max (nA)	@ $V_R$ (V)	$t_{rr}$ max (ns)	Package	SOT23	
								
						Size (mm)	2.9 x 1.3 x 1.0	
						$P_{tot}$ (mW)	300	
100	1	50	500	80	4		<b>BAS16TH</b>	
200	1	100	100	200	50		<b>BAS21TH</b>	




















### Controlled avalanche switching diodes

$V_R$ max (V)	$V_F$ max (V)	@ $I_F$ (mA)	$I_R$ max (nA) @ $V_R$ max	$I_{FSM}$ max (A)	$I_{FRM}$ max (mA)	$C_j$ max (pF)	$t_{rr}$ max (ns)	Package	Automotive-qualified	
									SOT23	SOT143B
										
									Size (mm)	2.9 x 1.3 x 1.0
$P_{tot}$ (mW)	250	250								
60	1	200	100	9	600	2.5	6			BAS56
90	1	200	100	10	600	35	50		BAS29	
									BAS31	
									BAS35	

Diodes




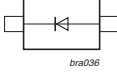
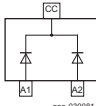
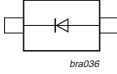
### Low leakage current switching diodes

$V_R$ max (V)	$V_F$ max (V)	@ $I_F$ (mA)	$I_R$ max (nA) @ $V_R$ max	$t_{rr}$ max ( $\mu$ s)	Package	Automotive-qualified										
						SOD80C (MiniMelf)	SOD68 (DO-34)	SOT23	SOD123	SOD123F	SOT323 (SC-70)	SOD323 (SC-76)	SOD523 (SC-79)	DFN1010D-3 (SOT1215)	DFN1006-3 (SOT883)	DFN1006-2 (SOD882)
																
						Size (mm)	3.5 x 1.5 x 1.5	3.04 x 1.6 x 0.55	2.9 x 1.3 x 1.0	2.7 x 1.6 x 1.2	2.6 x 1.6 x 1.1	2.0 x 1.25 x 0.95	1.7 x 1.25 x 0.95	1.2 x 0.8 x 0.6	1.1 x 1.0 x 0.37	1.0 x 0.6 x 0.48
$P_{tot}$ (mW)	400	300	250	380	375	250	250	250	305	250	250					
75	1	10	5	3					BAS116GW	BAS116H		BAS416	BAS716			BAS116L
							BAS116						BAS116QA			
							BAV199			BAV199W						
							BAW156									
125	1	100	1	1.5 typ		BAS45AL	BAS45A									
																

## Recovery rectifiers

### Recovery rectifiers

Types in **bold** represent new products

$V_r$ max (V)	$V_r$ max (V)	$(@) I_F$ (A)	$I_R$ max ( $\mu$ A)	$(@) V_R$ (V)	$t_{rr}$ max (ns)	Package	Automotive-qualified		
							CFP5 (SOD128)	CFP3 (SOD123W)	CFP15B (SOT1289B)
									
							Size (mm)		
						$P_{tot}$ (mW) @ 1cm <sup>2</sup>			
200	0.93	1	0.2	200	25			PNE20010ER	
	0.98	2	0.2	200	25			PNE20020ER	
	0.95	2	1	200	25		<b>PNE20020EP</b>		
	0.98	3	1	200	30		<b>PNE20030EP</b>		
	0.94	2x3	1	200	30				<b>PNE20060CPE</b>
	0.95	2x4	1	200	30				<b>PNE20080CPE</b>
	0.95	2x5	1	200	30				<b>PNE200100CPE</b>
400	1.1	1	1	400	1800			PNS40010ER	

### Nomenclature recovery rectifiers automotive grade types

**PNE 200 10 E R**

**Recovery time indicator:**

- PNE** - hyperfast recovery time
- PNU - ultrafast recovery time
- PNS - standard recovery time

**Max. reverse voltage:**

- 200** = 200 V
- 400 = 400 V
- 600 = 600 V

**Cont. Forward current:**

- 10** = 1.0 A
- 20 = 2.0 A
- 50 = 5.0 A
- 100 = 10.0 A

**Package indicator:**

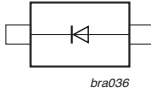


- R** = CFP3 (SOD123W)
- P = CFP5 (SOD128)
- PE = CFP15B (SOT1289B)

**configuration:**

- E** = single
- C = dual common cathode

# Power SiGe rectifiers in clip-bond packages






Types in **bold** represent new products

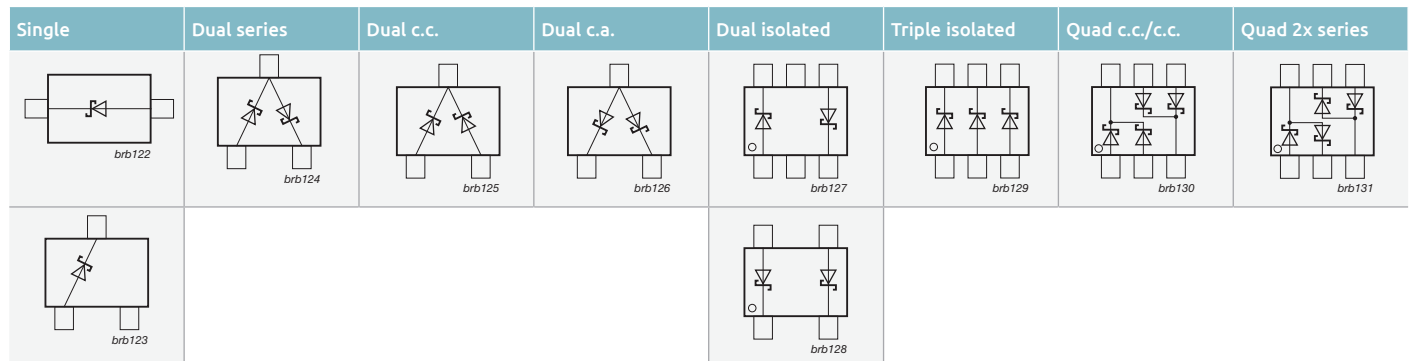
$V_R$ max (V)	$I_F$ max (A)	$V_F$ max (mV) @ $I_F$ max	$I_R$ max (μA) @ $V_R$ max	Package 	Automotive-qualified	
					CFP5 (SOD128) 	CFP3 (SOD123W) 
					Size (mm)	
					$P_{tot}$ (mW) @ 1 cm <sup>2</sup>	
120	1	840	0.03			
	2					
	3					
150	1	850	0.03			<b>PMEG120G10ELR</b>
	2				<b>PMEG120G20ELP</b>	<b>PMEG120G20ELR</b>
	3				<b>PMEG120G30ELP</b>	
200	1	880	0.03			<b>PMEG150G10ELR</b>
	2				<b>PMEG150G20ELP</b>	<b>PMEG150G20ELR</b>
	3				<b>PMEG150G30ELP</b>	
					<b>PMEG200G10ELR</b>	
					<b>PMEG200G20ELP</b>	<b>PMEG200G20ELR</b>
					<b>PMEG200G30ELP</b>	







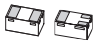
Diodes

# Schottky diodes and rectifiers







## General purpose Schottky diodes <= 250 mA

$I_F$ max (mA)	$V_R$ max (V)	$V_F$ max (mV)	@ $I_F$ (mA)	$I_R$ max (μA)	@ $V_R$ (V)	Package	SOD80C (MiniMelf)	SOD68 (DO-34)	SOT23	SOT143B	SOD123
											
							Size (mm)	3.5 x 1.5 x 1.5	3.04 x 1.6 x 0.55	2.9 x 1.3 x 1.0	2.9 x 1.3 x 1.0
$P_{tot}$ (mW)	300	500	250	250	357						
70	70	750	10	0.1	50	Single			BAS70		
						Dual series			BAS70-04		
						Dual c.c.			BAS70-05		
						Dual c.a.			BAS70-06		
						Dual isolated				BAS70-07	
						Triple isolated					
120	40	370	1	0.5	30	Single					
						Single			BAS40		
						Dual series			BAS40-04		
						Dual c.c.			BAS40-05		
						Dual c.a.			BAS40-06		
						Dual isolated				BAS40-07	
200	30	300	10	30	10	Single					
						Single			BAT754		
						Dual series			BAT754S		
		340	10	2	25	Dual c.c.			BAT754C		
						Dual c.a.			BAT754A		
						Triple isolated					
	400	10	2	25	Single	BAS85	BAT85	BAT54		BAT54GW	
					Dual series			BAT54S			
					Dual c.c.			BAT54C			
					Dual c.a.			BAT54A			
					Dual isolated				BAT74		
					Triple isolated						
40	500	200	30	10	Single						
					Single						
					Single			BAT721			
	300	10	15	30	Dual series			BAT721S			
					Dual c.c.			BAT721C			
					Dual c.a.			BAT721A			
360	10	0.5	25	Single							
				Single							
				Dual series							
420	30	0.5	25	Dual c.c.							
				Dual c.a.							
				Triple isolated							
50	450	10	5	40	Single	BAS86	BAT86				
					Single						
250	100	850	250	4	75	Single					BAT46GW






Automotive-qualified							
SOD123F	SOT323 (SC-70)	SOT363 (SC-88)	SOD323F (SC-90)	SOD323 (SC-76)	SOD523 (SC-79)	DFN1006-2 (SOD882)/ DFN1006-3 (SOT883)	
							
2.6 x 1.6 x 1.1	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.7 x 1.25 x 0.7	1.7 x 1.25 x 0.95	1.2 x 0.8 x 0.6	1.0 x 0.6 x 0.48	
375	250	300	385	400	275	250	
BAS70H	BAS70W BAS70-04W BAS70-05W BAS70-06W	BAS70-07S BAS70XY		1PS76SB70	1PS79SB70	BAS70L	
BAS40H	BAS40W BAS40-04W BAS40-05W BAS40-06W	1PS88SB48 BAS40XY		RB751V40 1PS76SB40	RB751S40 1PS79SB40	RB751CS40 BAS40L	
BAT54H	BAT54W BAT54SW BAT54CW BAT54AW	BAT754L BAT74S BAT54XY	BAT54J	1PS76SB10	1PS79SB10	BAT54L BAT54CM	
BAT46WH	BAT854W BAT854SW BAT854CW BAT854AW		BAT46WJ	1PS76SB21	RB521S30 RB520S30 1PS79SB30	RB521CS30L RB520CS30L	








## Low capacitance Schottky diodes

						Automotive-qualified						
I <sub>F</sub> max (mA)	V <sub>r</sub> max (V)	V <sub>F</sub> max (mV) @ I <sub>F</sub> (mA)	C <sub>j</sub> max (pF) @ V <sub>r</sub> = 0 V	Package	SOT23	SOT323 (SC-70)	SOT363 (SC-88)	SOD323 (SC-76)	SOD523 (SC-79)	DFN1006-2 (SOD882)		
												
					Size (mm)	2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.7 x 1.25 x 0.95	1.2 x 0.8 x 0.6	1.0 x 0.6 x 0.48	
					P <sub>tot</sub> (mW)	250	250	300	400	500	250	
30	4	450	1	1	Single	BAT17			1PS76SB17	1PS79SB17		
					Triple isolated							
					Dual series	PMBD353 PMBD354 <sup>1)</sup>						
					Single		1PS70SB82				1PS10SB82	
	15	340	1	1	Triple isolated			1PS88SB82				
					Dual series		1PS70SB84					
					Dual c.c.		1PS70SB85					
					Dual c.a.		1PS70SB86					

<sup>1)</sup> Diodes have matched capacitance





Schottky rectifiers - leadless DSN / DFN packages

$I_F$ max (A)	$V_R$ max (V)	$V_F$ max (mV) @ $I_F$ max	$I_R$ max (mA) @ $V_R$ max	Package	DSN0603-2 (SOD962)	DSN0603B-2 (SOD962B)	DSN1006-2 (SOD993)		
									
					0.6 x 0.3 x 0.3	0.6 x 0.3 x 0.2	1.0 x 0.6 x 0.28		
					525	525	1.000		
Optimization									
0.1	30	840	0.0008	Low $I_R$					
		420	0.045	Low $V_F$	PMEG2002AESF	PMEG2002AESFB			
	20	30	490	0.0035	Low $I_R$	PMEG2002ESF			
			470	0.08	Low $V_F$	PMEG3002AESF			
			480	0.05	low $V_F$				
		520	0.015	Low $I_R$					
		535	0.009	Low $I_R$	PMEG3002ESF				
		525	0.08	Low $V_F$	PMEG4002AESF				
	40	600	0.0065	Low $I_R$	PMEG4002ESF				
			0.01	low $I_R$					
600		0.1	low $V_F$						
0.2	20	390	0.2	low $V_F$					
		410	0.3	low $V_F$					
		440	1.5	low $V_F$					
		500	0.03	low $I_R$					
		550	0.045	Low $V_F$	PMEG2005AESF				
		620	0.0035	Low $I_R$	PMEG2005ESF				
	30	500	0.5	low $V_F$					
			630	0.08	Low $V_F$	PMEG3005AESF			
		670	0.015	Low $I_R$					
		720	0.009	Low $I_R$	PMEG3005ESF				
	40	590	0.01	low $I_R$					
			820	0.08	Low $V_F$	PMEG4005AESF			
		880	0.0065	Low $I_R$	PMEG4005ESF				
	1	20	375	1.9	low $V_F$				
			415	0.6	low $V_F$				
490			0.2	low $V_F$					
30		480	1.25	Low $V_F$			PMEG3010AESB		
		565	0.045	Low $I_R$			PMEG3010ESB		
40		505	0.115	Low $V_F$			PMEG4010AESB		
		600	0.02	low $I_R$					
		610	0.04	Low $I_R$			PMEG4010ESB		
60		625	0.65	Low $V_F$			PMEG6010AESB		
		730	0.03	Low $I_R$			PMEG6010ESB		
1.5	20	420	0.9	low $V_F$					
	40	610	0.03	low $I_R$					
2	20	420	1.9	low $V_F$					
		450	0.9	low $V_F$					
	30	470	2.5	low $V_F$					
	40	535	0.1	low $V_F$					
		530	0.2	low $V_F$					
60	575	0.25	low $V_F$						

Automotive-qualified							
DSN1006U-2 (SOD995)	DFN2020-3 (SOT1061)	DFN2020D-3 (SOT1061D)	DFN1608D-2 (SOD1608)	DFN1006-2 (SOD882)	DFN1006D-2 (SOD882D)	DFN0603-2 (SOD972E)	
							
1.0 x 0.6 x 0.28	2.0 x 2.0 x 0.62	2.0 x 2.0 x 0.62	1.6 x 0.8 x 0.37	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37	0.63 x 0.33 x 0.25	
1.190	960	960	780	565	660	570	
							PMEG3001EEF
				PMEG3002AEL	PMEG3002AELD		PMEG3002EEF
				PMEG4002EL	PMEG4002ELD		
				PMEG6002EL	PMEG6002ELD		
			PMEG2005EPK		PMEG2005BELD		
				PMEG2005AEL	PMEG2005AELD		
				PMEG2005EL	PMEG2005ELD		
				PMEG3005EL	PMEG3005ELD		
							PMEG3005EEF
			PMEG4005EPK				
	PMEG2010EPA	PMEG2010EPAS					
			PMEG2010EPK				
PMEG3010AESA					PMEG2010BELD		
			PMEG4010EPK				
			PMEG2015EPK				
			PMEG4015EPK				
	PMEG2020EPA	PMEG2020EPAS					
			PMEG2020EPK				
	PMEG3020EPA	PMEG3020EPAS					
	PMEG4020EPA	PMEG4020EPAS					
			PMEG4020EPK				
	PMEG6020EPA	PMEG6020EPAS					

Power Schottky rectifiers - clip-bond packages

Types in **bold** represent new products





I <sub>F</sub> max (A)	V <sub>R</sub> max (V)	V <sub>F</sub> max (mV) @ I <sub>F</sub> max	I <sub>R</sub> max (mA) @ V <sub>R</sub> max	Package	Automotive-qualified				
					CFP15 (SOT1289)	CFP15B (SOT1289B)	CFP5 (SOD128)	CFP3 (SOD123W)	
									
					Size (mm)	5.8 x 4.3 x 0.78	5.8 x 4.3 x 0.95	3.8 x 2.5 x 1.0	2.6 x 1.7 x 1.0
					P <sub>tot</sub> (mW) @ 1 cm <sup>2</sup>	2150	2150	1050	950
Optimization									
1	20	340	1	Low V <sub>F</sub>				PMEG2010ER	
		450	0.05	Low I <sub>R</sub>				PMEG2010BER	
	30	360	1.5	Low V <sub>F</sub>			PMEG3010EP	PMEG3010ER	
		450	0.05	Low I <sub>R</sub>			PMEG3010BEP	PMEG3010BER	
	40	490	0.05	Low V <sub>F</sub>			PMEG4010EP	PMEG4010ER	
				Low V <sub>F</sub>			PMEG4010ETP	PMEG4010ETR	
		460	0.022	Low V <sub>F</sub> /Low I <sub>R</sub>				PMEG40T10ER <sup>1)</sup>	
	60	530	0.06	Low V <sub>F</sub>			PMEG6010EP	PMEG6010ER	
				Low V <sub>F</sub>				PMEG6010ETR	
		590	0.0008	Low V <sub>F</sub> /Low I <sub>R</sub>			PMEG60T10ELP <sup>1)</sup>		
600		0.00065	Low V <sub>F</sub> /Low I <sub>R</sub>				PMEG60T10ELR <sup>1)</sup>		
100	660	0.0003	Low I <sub>R</sub>				PMEG6010ELR		
	770	0.00015	Low I <sub>R</sub>				PMEG10010ELR		
2	30	360	3	Low V <sub>F</sub>			PMEG3020EP		
		420	1.5	Low V <sub>F</sub>			PMEG3020CEP	PMEG3020ER	
		450	0.1	Low I <sub>R</sub>			PMEG3020BEP		
		520	0.05	Low I <sub>R</sub>			PMEG3020DEP	PMEG3020BER	
	40	490	0.1	Low V <sub>F</sub>			PMEG4020EP	PMEG4020ER	
				Low V <sub>F</sub>			PMEG4020ETP	PMEG4020ETR	
	60	515	0.022	Low V <sub>F</sub> /Low I <sub>R</sub>			PMEG40T20EP <sup>1)</sup>	PMEG40T20ER <sup>1)</sup>	
				Low V <sub>F</sub>			PMEG6020EP	PMEG6020ER	
		530	0.2	Low V <sub>F</sub>			PMEG6020ETP	PMEG6020ETR	
		620	0.0012	Low V <sub>F</sub> /Low I <sub>R</sub>			PMEG60T20ELP <sup>1)</sup>	PMEG60T20ELR <sup>1)</sup>	
	100	670	0.0007	Low I <sub>R</sub>			PMEG6020AELP	PMEG6020AELR	
				760	0.0003	Low I <sub>R</sub>			PMEG6020ELR
		770	0.0003	Low I <sub>R</sub>			PMEG10020AELP	PMEG10020AELR	
		830	0.00015	Low I <sub>R</sub>				PMEG10020ELR	
3	30	360	5	Low V <sub>F</sub>			PMEG3030EP		
		450	0.15	Low I <sub>R</sub>	PMEG030V030EPD		PMEG3030BEP		
	40	490	0.12	Low V <sub>F</sub>	PMEG040V030EPD				
				Low V <sub>F</sub>			PMEG4030EP		
		525	0.028	Low V <sub>F</sub> /Low I <sub>R</sub>			PMEG40T30EP <sup>1)</sup>	PMEG40T30ER <sup>1)</sup>	
				Low I <sub>R</sub>				PMEG4030ER	
	45	480	0.044	Low V <sub>F</sub> /Low I <sub>R</sub>	PMEG045T030EPD <sup>1)</sup>				
	50	530	0.1	Low V <sub>F</sub>	PMEG050V030EPD				
	60	475	0.4	Low V <sub>F</sub>			PMEG6030EVP		
				Low V <sub>F</sub>	PMEG060V030EPD		PMEG6030EP		
530		0.2	Low V <sub>F</sub>			PMEG6030ETP			
			Low V <sub>F</sub> /Low I <sub>R</sub>			<b>PMEG060T030ELPE<sup>1)</sup></b>	PMEG60T30ELP <sup>1)</sup>		
620	0.0018	Low V <sub>F</sub> /Low I <sub>R</sub>			PMEG60T30ELR <sup>1)</sup>				
670	0.001	Low I <sub>R</sub>			PMEG6030ELP				
100	770	0.00045	Low I <sub>R</sub>			PMEG10030ELP			
4.5	60	530	0.4	Low V <sub>F</sub>			PMEG6045ETP		
5	30	360	8	Low V <sub>F</sub>			PMEG3050EP		
		450	0.25	Low I <sub>R</sub>			PMEG3050BEP		
		500	0.15	Low V <sub>F</sub>	PMEG030V050EPD				
	40	490	0.3	Low V <sub>F</sub>			PMEG4050EP		
				Low V <sub>F</sub>			PMEG4050ETP		
		520	0.12	Low V <sub>F</sub>	PMEG040V050EPD				
	525	0.041	Low V <sub>F</sub> /Low I <sub>R</sub>				PMEG40T50EP <sup>1)</sup>		
			Low V <sub>F</sub>	PMEG045V050EPD					
45	525	0.044	Low V <sub>F</sub> /Low I <sub>R</sub>	PMEG045T050EPD <sup>1)</sup>					
	560	0.4	Low V <sub>F</sub>	PMEG060V050EPD					
60	690	0.0018	Low V <sub>F</sub> /Low I <sub>R</sub>			<b>PMEG060T050ELPE<sup>1)</sup></b>	PMEG60T50ELP <sup>1)</sup>		
	620	0.0018	Low V <sub>F</sub> /Low I <sub>R</sub>			<b>PMEG060T060CLPE<sup>1)</sup></b>			
2x3	60	840	0.00045	Low I <sub>R</sub>	PMEG100V060ELPD				
6	100	660	0.0018	Low V <sub>F</sub> /Low I <sub>R</sub>			<b>PMEG060T080CLPE<sup>1)</sup></b>		
2x4	60	850	0.0005	Low I <sub>R</sub>	PMEG100V080ELPD				
8	100	690	0.0018	Low V <sub>F</sub> /Low I <sub>R</sub>			<b>PMEG060T100CLPE<sup>1)</sup></b>		
2x5	60								

<sup>1)</sup> Trench process











## Power Schottky rectifiers - clip-bond packages

Types in **bold** represent new products









$I_F$ max (A)	$V_R$ max (V)	$V_F$ max (mV) @ $I_F$ max	$I_R$ max (mA) @ $V_R$ max	Package	Automotive-qualified				
					CFP15 (SOT1289)	CFP15B (SOT1289B)	CFP5 (SOD128)	CFP3 (SOD123W)	
									
					Size (mm)	5.8 x 4.3 x 0.78	5.8 x 4.3 x 0.95	3.8 x 2.5 x 1.0	2.6 x 1.7 x 1.0
					$P_{tot}$ (mW) @ 1 cm <sup>2</sup>	2150	2150	1050	950
Optimization									
10	45	490	0.6	Low $V_F$	PMEG045V100EPD				
		540	0.5	Low $V_F$	PMEG45A10EPD				
		545	0.08	Low $V_F$ /Low $I_R$	PMEG045T100EPD <sup>1)</sup>				
	60	560	0.7	Low $V_F$	PMEG060V100EPD				
	100	850	0.0008	Low $I_R$	PMEG100V100ELPD				
15	45	490	1	Low $V_F$	PMEG045V150EPD				
		550	0.1	Low $V_F$ /Low $I_R$	PMEG045T150EPD <sup>1)</sup>				
		580		Low $V_F$ /Low $I_R$	PMEG45T15EPD <sup>1)</sup>				
		570	0.098	Low $V_F$ /Low $I_R$	PMEG045T150EIPD <sup>1)</sup>				
	50	500	1	Low $V_F$	PMEG050V150EPD				
		550	0.1	Low $I_R$	PMEG050T150EPD <sup>1)</sup>				
		570	0.2	Low $V_F$ /Low $I_R$	<b>PMEG050T150EIPD<sup>1)</sup></b>				

<sup>1)</sup> Trench process
















## Schottky rectifiers - leaded packages

$I_F$ max (A)	$V_R$ max (V)	$V_F$ max (mV) @ $I_F$ max	$I_R$ max (mA) @ $V_R$ max	Package	Automotive-qualified								
					SOT457 (SC-74)	SOT23	SOD123	SOD123F	SOT323 (SC-70)	SOD323F (SC-90)	SOD323 (SC-76)	SOD523 (SC-79)	
													
					Size (mm)	2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0	2.7 x 1.6 x 1.2	2.6 x 1.6 x 1.1	2.0 x 1.25 x 0.95	1.7 x 1.25 x 0.7	1.7 x 1.25 x 0.95	1.2 x 0.8 x 0.6
					$P_{tot}$ (mW) @ 1 cm <sup>2</sup>	540	420	660	830	400	830	570	500
Optimization													
0.2	30	480	0.05	Low $V_F$						PMEG3002EJ	PMEG3002AEB		
	40	600	0.01	Low $I_R$						PMEG4002EJ	PMEG4002EB		
	60	600	0.1	Low $V_F$						PMEG6002EJ	PMEG6002EB		
0.5	20	390	0.2	Low $V_F$		PMEG2005ET	PMEG2005EGW	PMEG2005EH		PMEG2005EJ	PMEG2005AEA		
		480	0.03	Low $I_R$								PMEG2005EB	
	30	430	0.15	Low $V_F$		PMEG3005ET	PMEG3005EGW	PMEG3005EH		PMEG3005EJ	PMEG3005AEA		
		500	0.5	Low $V_F$								PMEG3005EB	
	40	470	0.1	Low $V_F$		PMEG4005ET	PMEG4005EGW	PMEG4005EH		PMEG4005EJ	PMEG4005AEA		
		550	1.1	Low $V_F$		BAT720			1PS70SB20				
0.75	40	640	0.008	Low $I_R$						PMEG4005CEJ	PMEG4005CEA		
		740	0.008	Low $I_R$							BAT165A		

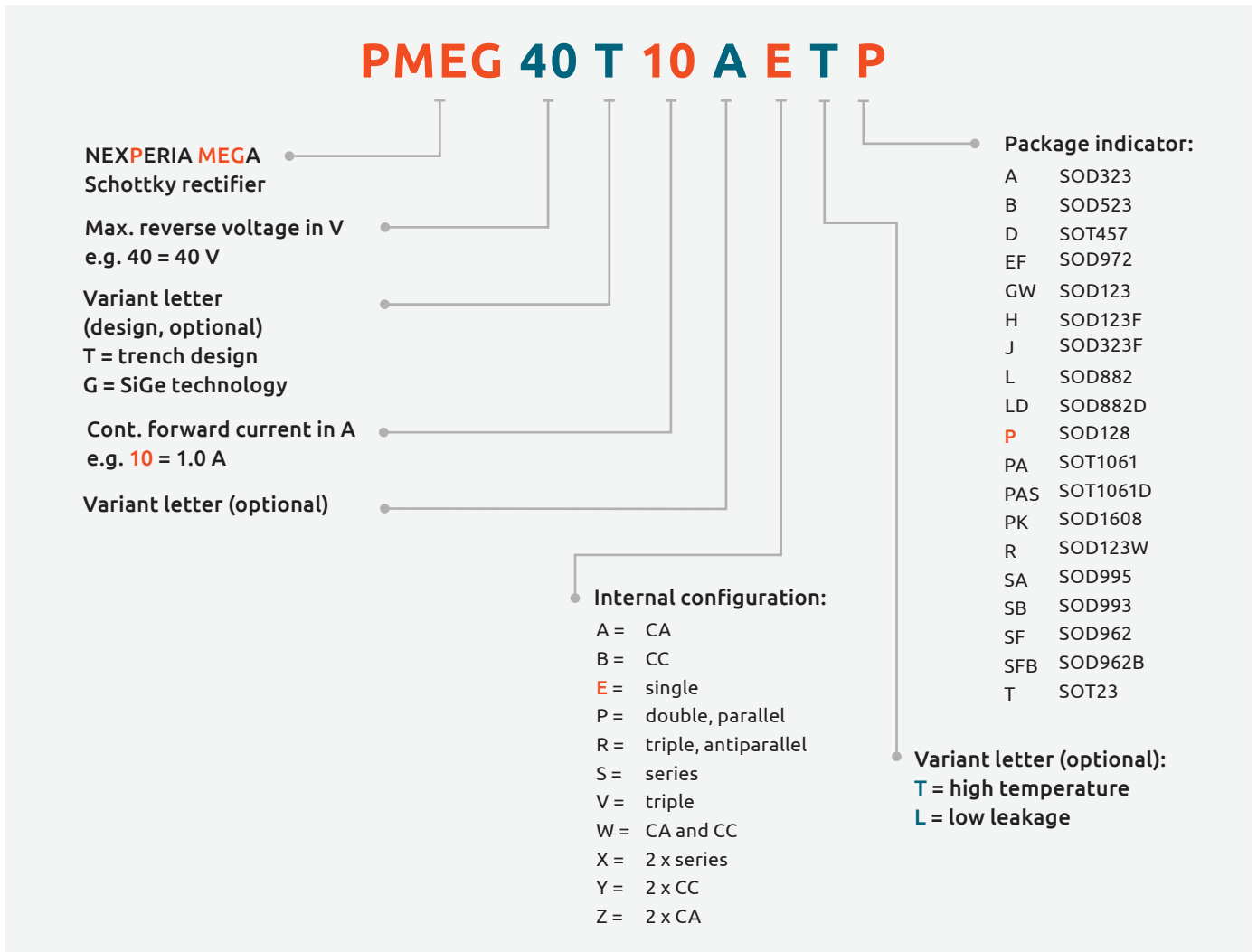
## Schottky rectifiers - leaded packages

					Automotive-qualified								
$I_F$ max (A)	$V_R$ max (V)	$V_F$ max (mV) @ $I_F$ max	$I_R$ max (mA) @ $V_R$ max	Package	SOT457 (SC-74)	SOT23	SOD123	SOD123F	SOT323 (SC-70)	SOD323F (SC-90)	SOD323 (SC-76)	SOD523 (SC-79)	
													
					Size (mm)	2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0	2.7 x 1.6 x 1.2	2.6 x 1.6 x 1.1	2.0 x 1.25 x 0.95	1.7 x 1.25 x 0.7	1.7 x 1.25 x 0.95	1.2 x 0.8 x 0.6
					$P_{tot}$ (mW) @ 1 cm <sup>2</sup>	540	420	660	830	400	830	570	500
Optimization													
1	20	430	0.2	Low $V_F$		PMEG2010AET		PMEG2010AEH					
		500	0.2	Low $V_F$		PMEG2010ET		PMEG2010EH		PMEG2010EJ	PMEG2010BEA		
		550	0.07	Low $I_R$						PMEG2010AEJ	PMEG2010EA BAT760		
		620	1.5	Low $V_F$								PMEG2010AEB	
1	30	450	1	Low $V_F$	1PS745B23								
		520	0.1	Low $I_R$				PMEG3010CEH		PMEG3010CEJ			
		560	0.15	Low $V_F$		PMEG3010ET	PMEG3010EGW	PMEG3010EH		PMEG3010EJ	PMEG3010BEA		
		680	0.5	Low $V_F$								PMEG3010EB	
	40	570	0.05	Low $I_R$			PMEG4010CEGW	PMEG4010CEH		PMEG4010CEJ			
		640	0.05	Low $V_F$		PMEG4010ET	PMEG4010EGW	PMEG4010EH		PMEG4010EJ	PMEG4010BEA		
		840	0.008	Low $I_R$							PMEG4010CEA		
		660	0.05	Low $I_R$			PMEG6010CEGW	PMEG6010CEH		PMEG6010CEJ			
1.5	20	660	0.2	Low $I_R$			PMEG2015EH		PMEG2015EJ	PMEG2015EA			
	30	500	1	Low $V_F$			PMEG3015EH		PMEG3015EJ				
2	10	460	3	Low $V_F$			PMEG1020EH		PMEG1020EJ	PMEG1020EA			
	20	525	0.2	Low $V_F$			PMEG2020EH		PMEG2020EJ	PMEG2020AEA			
	30	620	1	Low $V_F$		PMEG3020EGW	PMEG3020EH		PMEG3020EJ				
3	10	530	3	Low $V_F$			PMEG1030EH		PMEG1030EJ				

## Dual Schottky rectifiers - leaded / leadless DFN packages

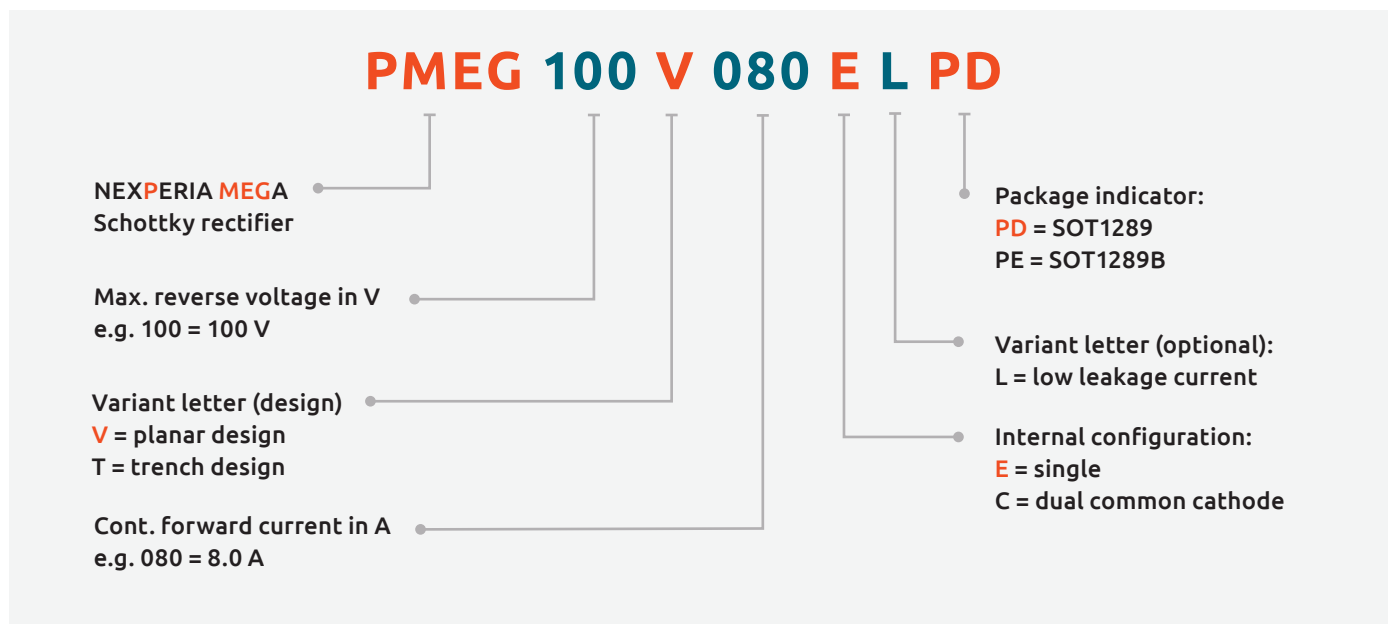
					Automotive-qualified					
$I_F$ max (A)	$V_R$ max (V)	$V_F$ max (mV) @ $I_F$ max	$I_R$ max (mA) @ $V_R$ max	Optimization	Package	SOT223 (SC-73)	SOT23	DFN2020-3 (SOT1061)	DFN2020D-3 (SOT1061D)	
										
						Size (mm)	6.5 x 3.5 x 1.65	2.9 x 1.3 x 1.0	2.0 x 2.0 x 0.62	2.0 x 2.0 x 0.63
						$P_{tot}$ (mW) @ 1 cm <sup>2</sup>	1500	400	1000	1000
0.5	20	390	0.2	Low $V_F$						
	30	430	0.15	Low $V_F$			PMEG2005CT			
	40	470	0.1	Low $V_F$			PMEG3005CT			
1.0	25	450	1.0	Low $V_F$		BAT120S				
				Low $V_F$		BAT120C				
				Low $V_F$		BAT120A				
	40	500	0.05	Low $V_F$				PMEG4010CPA	PMEG4010CPAS	
				Low $V_F$				PMEG6010CPA	PMEG6010CPAS	
	60	650	0.35	Low $V_F$		BAT160S				
				Low $V_F$		BAT160C				
Low $V_F$					BAT160A					
2.0	20	420	1.0	Low $V_F$				PMEG2020CPA	PMEG2020CPAS	
	30	440	2.0	Low $V_F$				PMEG3020CPA	PMEG3020CPAS	

## Nomenclature of Schottky and SiGe rectifiers



Diodes

## Nomenclature of automotive grade Schottky rectifiers in CFP15/B power packages





# ESD protection, TVS, filtering and signal conditioning

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## Classic In-Vehicle Networks

Types in **bold** represent new products

Main Application	number of protected lines, bidirectional	$V_{RWM}$ (V)	ESD rating max (kV) [1]	$C_{line}$ typ (pF)	$C_{line}$ max (pF)	$I_{ppm}$ 8/20µs (A)	$V_{CL}$ 8/20µs @ $I_{ppm}$ (V)	Configuration	Type	Package	Size (mm)			
LIN	1	24	30	14	17	3,5	42		PESD1IVN24-A	SOD323 (SC-76)	1.7 x 1.25 x 0.95			
		15 (diode 1) 24 (diode 2)	30	13	17	3 (diode 1) 5 (diode 2)	70 (diode 1) 44 (diode 2)		PESD1LIN					
		27	30	14	17	3	45		PESD1IVN27-A					
			30	14	17	3	45		PESD1IVN27-U		2.0 x 1.25 x 0.95			
CAN	2	24	30	14	17	3.5	42		PESD2IVN24-T	SOT23	2.9 x 1.3 x 1.0			
			23	11	17	3	70		PESD1CAN					
			30	25	30	5	41		PESD2CAN					
		27	30	14	17	3	45		PESD2IVN27-T	SOT323	2.0 x 1.25 x 0.95			
		24	30	14	17	3.5	42		PESD2IVN24-U					
		27	30	14	17	3	45		PESD2IVN27-U					
		CAN-FD	2	24	25	5,6	6		1.2	42		<b>PESD2CANFD24V-T</b>	SOT23	2.9 x 1.3 x 1.0
					15	3.1	3.5		1	42		<b>PESD2CANFD24U-T</b>		
27	25			5.6	6	1	44	<b>PESD2CANFD27V-T</b>						
	15			3.1	3.5	1	44	<b>PESD2CANFD27U-T</b>						
24	25			5.6	6	1.2	42	<b>PESD2CANFD24V-U</b>	SOT323	2.0 x 1.25 x 0.95				
	15			3.1	3.5	1	42	<b>PESD2CANFD24U-U</b>						
27	25			5.6	6	1	44	<b>PESD2CANFD27V-U</b>						
	15			3.1	3.5	1	44	<b>PESD2CANFD27U-U</b>						
FlexRay	24	23	11	17	3	70		PESD1FLEX		2.0 x 1.25 x 0.95				
								PESDxIVN						




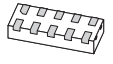
## Automotive Ethernet

Types in **bold** represent new products

Main Application	Number of protected lines	$V_{RWM}$ (V)	$V_{trigger}$ min(V)	ESD rating max (kV) [1]	$C_{line}$ typ (pF)	$C_{line}$ max (pF)	$I_{RM}$ max (µA)	Configuration	Type	Package	Size (mm)
OPEN Alliance 100/1000BASE-T1 Ethernet at the connector	2	24	100	30	-	2	0.1		<b>PESD2ETH1G-T</b>	SOT23	2.9 x 1.3 x 1.0
OPEN Alliance 100BASE-T1 Ethernet at the connector				30	-	3			<b>PESD2ETH100-T</b>		
10/100/1000 Mbit/s Ethernet at the PHY	2	5	-	8	1	1.5	0.1		PESD2ETH-X	SOT143B	2.9 x 1.3 x 1.0
				12	1.8	-			PESD2ETH-AX		
				8	1.3	1.5			PESD2ETH-D	SOT457	2.9 x 1.5 x 1.0
				12	2	2.3			PESD2ETH-AD		
	1	5.5	-	10	0.4	0.55		PESD5V0F1BL	DFN1006-2 (SOD882)		1.0 x 0.6 x 0.48



## TrEOS Automotive

Types in **bold** represent new products

Main Application	Number of protected lines	$V_{RWM}$ (V)	ESD rating max (kV) <sup>[1]</sup>	$C_{line}$ typ (pF)	$C_{line}$ max (pF)	$I_{PPM}$ 8/20 $\mu$ s (A)	$V_{CL}$ 8/20 $\mu$ s typ (V)	Configuration	Type	Package	Size (mm)
USB2.0 HDMI LVDS	2	3.3	11	0.8	0.9	-	-		<b>PESD2USB3UV-T</b>	SOT23 	2.9 x 1.3 x 1.0
		3.3	11	0.5	0.6	-	-		<b>PESD2USB3UX-T</b>		
		5	11	0.7	0.8	-	-		<b>PESD2USB5UV-T</b>		
		5	11	0.4	0.5	-	-		<b>PESD2USB5UX-T</b>		
USB2.0 HDMI LVDS	4	3.3	10	0.5	0.6	-	4.6 V @ 5.2 A		<b>PESD4USB3R-TBR</b>	DFN2510A-10 (SOT1176-1) 	2.5 x 1.0 x 0.5
		5	10	0.5	0.6	-	4.6 V @ 5.2 A		<b>PESD4USB5R-TBR</b>		
USB3.x HDMI LVDS		3.3	15	0.29	0.34	7	3 V @ 5 A		<b>PESD4USB3U-TBR</b>		
		5	15	0.29	0.34	7	3 V @ 5 A		<b>PESD4USB5U-TBR</b>		

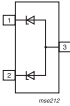

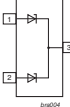

ESD protection, TVS, filtering and signal conditioning

## Infotainment / SerDes

Main Application	Number of protected lines	$V_{RWM}$ (V)	ESD rating max (kV) <sup>[1]</sup>	$C_{line}$ typ (pF)	$C_{line}$ max (pF)	$I_{PPM}$ 8/20 $\mu$ s (A)	$V_{CL}$ 8/20 $\mu$ s typ (V)	Configuration	Type	Package	Size (mm)
Audio Interface Charger Port Antenna (NFC, WiFi) LVDS	1	4.5	30	65	78	34	13.2		PTVS4V5D1BL	DFN1006-2 (SOD882) 	1.0 x 0.6 x 0.48
		5	10	0.4	0.55	-	-		PESD5V0F1BLD		
		5	10	0.4	0.55	-	-		PESD5V0F1BRD		
		5.5	30	70	84	35	12.2		PTVS5V5D1BL		
		18	10	0.35	0.5	1	17		PESD18VF1BL		
		24	10	0.3	0.45	1	17		PESD24VF1BL		
		30	10	0.27	0.4	1	17		PESD30VF1BL		
		5	30	35	45	12	14		PESD5V0S1BLD		
		5	30	11	13	4.8	12.5		PESD5V0V1BLD		

<sup>[1]</sup> According to IEC 61000-4-2


TVS diodes, 24 W/40 W

Power (W) (10 / 1000 $\mu$ s waveform) [1]	$V_{RWM}$ (V)	$V_{min}$ (V) @ I	$V_{typ}$ (V) @ I	$V_{BR, max}$ (V) @ $I_R$	$I_R$ (mA)	ESD rating max (kV)	C typ (pF)	$V_{CL, max}$ (V) @ IPP [1]	$I_{PP}$ (A) [1]	$I_{RM, max}$ ( $\mu$ A) @ $V_{RWM}$	Configuration	Type	Package	Size (mm)			
24	3	5.32	5.6	5.88	20	30	210	8	3	5		MMBZ5V6AL		2.9 x 1.3 x 1.0			
		5.89	6.2	6.51	1	30	175	8.7	2.76	0.2		MMBZ6V2AL					
	4.5	6.48	6.8	7.14	1	30	150	9.6	2.5	0.3		MMBZ6V8AL					
	6	8.65	9.1	9.56	1	30	155	14	1.7	0.1		MMBZ9V1AL					
	6.5	9.5	10	10.5	1	30	130	14.2	1.7	0.02		MMBZ10VAL					
40	8.5	11.4	12	12.6	1	30	110	17	2.35	0.005					MMBZ12VAL		2.9 x 1.3 x 1.0
		14.25	15	15.75	1	30	85	21	1.9	0.005					MMBZ15VAL		
		15.2	16	16.8	1	30	76	23	1.9	0.005					MMBZ16VAL		
		15.68	16	16.32	1	30	76	23	1.9	0.005					MMBZ16VTAL		
		17.1	18	18.9	1	30	70	25	1.6	0.005					MMBZ18VAL		
		19	20	21	1	30	65	28	1.4	0.005					MMBZ20VAL		
		25.65	27	28.35	1	30	48	40	1	0.005					MMBZ27VAL		
		31.35	33	34.65	1	30	45	46	0.87	0.005					MMBZ33VAL		
		11.4	12	12.6	1	30	110	17	2.35	0.005	MMBZ12VDL						
		14.3	15	15.8	1	30	85	21.2	1.9	0.005	MMBZ15VDL						
		17.1	18	18.9	1	30	70	25	1.6	0.005	MMBZ18VCL						
		19	20	21	1	30	65	28	1.4	0.005	MMBZ20VCL						
		25.65	27	28.35	1	30	48	38	1	0.005	MMBZ27VCL						
		31.35	33	34.65	1	30	45	46	0.87	0.005	MMBZ33VCL						

[1] 10/1000 $\mu$ s according to IEC 61643-321




TVS 400 W

Power (W) (10/1000 µs waveform) [1]	$V_{RWM}$ (V)	$V_{BR\ min}$ (V) @ $I_R$	$V_{BR\ typ}$ (V) @ $I_R$	$V_{BR\ max}$ (V) @ $I_R$	$V_{CL\ max}$ (V) @ $I_{PP}$ [1]	$V_{CL\ max}$ (V) @ $I_{PPM}$ [1]	$I_{PP}$ (A) [1]	$I_{RM\ typ}$ (µA) @ $V_{RWM}$	$I_{RM\ max}$ (µA) @ $V_{RWM}$	Type (Tj max = 150 °C)	Type (Tj max = 185 °C)	Package	Size (mm)
350	3.5	5.20	5.60	6.00	10	8.0	43.8	5	600	PTVS3V3S1UR	PTVS3V3S1UTR		2.6 x 1.7 x 1.0
400	5.0	6.40	6.70	7.00	10	9.2	43.5	5	400	PTVS5V0S1UR	PTVS5V0S1UTR		
	6.0	6.67	7.02	7.37	10	10.3	38.8	5	400	PTVS6V0S1UR	PTVS6V0S1UTR		
	6.5	7.22	7.60	7.98	10	11.2	35.7	5	250	PTVS6V5S1UR	PTVS6V5S1UTR		
	7.0	7.78	8.20	8.60	10	12.0	33.3	3	100	PTVS7V0S1UR	PTVS7V0S1UTR		
	7.5	8.33	8.77	9.21	1	12.9	31.0	0.2	50	PTVS7V5S1UR	PTVS7V5S1UTR		
	8.0	8.89	9.36	9.83	1	13.6	29.4	0.03	25	PTVS8V0S1UR	PTVS8V0S1UTR		
	8.5	9.44	9.92	10.40	1	14.4	27.8	0.01	10	PTVS8V5S1UR	PTVS8V5S1UTR		
	9.0	10.00	10.55	11.10	1	15.4	26.0	0.005	5	PTVS9V0S1UR	PTVS9V0S1UTR		
	10	11.10	11.70	12.30	1	17.0	23.5	0.005	2.5	PTVS10V51UR	PTVS10V51UTR		
	11	12.20	12.85	13.50	1	18.2	22.0	0.005	2.5	PTVS11V51UR	PTVS11V51UTR		
	12	13.30	14.00	14.70	1	19.9	20.1	0.005	2.5	PTVS12V51UR	PTVS12V51UTR		
	13	14.40	15.15	15.90	1	21.5	18.6	0.001	0.1	PTVS13V51UR	PTVS13V51UTR		
	14	15.60	16.40	17.20	1	23.2	17.2	0.001	0.1	PTVS14V51UR	PTVS14V51UTR		
	15	16.70	17.60	18.50	1	24.4	16.4	0.001	0.1	PTVS15V51UR	PTVS15V51UTR		
	16	17.80	18.75	19.70	1	26.0	15.4	0.001	0.1	PTVS16V51UR	PTVS16V51UTR		
	17	18.90	19.90	20.90	1	27.6	14.5	0.001	0.1	PTVS17V51UR	PTVS17V51UTR		
	18	20.00	21.00	22.10	1	29.2	13.7	0.001	0.1	PTVS18V51UR	PTVS18V51UTR		
	20	22.20	23.35	24.50	1	32.4	12.3	0.001	0.1	PTVS20V51UR	PTVS20V51UTR		
	22	24.40	25.60	26.90	1	35.5	11.3	0.001	0.1	PTVS22V51UR	PTVS22V51UTR		
	24	26.70	28.10	29.50	1	38.9	10.3	0.001	0.1	PTVS24V51UR	PTVS24V51UTR		
	26	28.90	30.40	31.90	1	42.1	9.5	0.001	0.1	PTVS26V51UR	PTVS26V51UTR		
	28	31.10	32.80	34.40	1	45.4	8.8	0.001	0.1	PTVS28V51UR	PTVS28V51UTR		
	30	33.30	35.10	36.80	1	48.4	8.3	0.001	0.1	PTVS30V51UR	PTVS30V51UTR		
	33	36.70	38.70	40.60	1	53.3	7.5	0.001	0.1	PTVS33V51UR	PTVS33V51UTR		
	36	40.00	42.10	44.20	1	58.1	6.9	0.001	0.1	PTVS36V51UR	PTVS36V51UTR		
	40	44.40	46.80	49.10	1	64.5	6.2	0.001	0.1	PTVS40V51UR	PTVS40V51UTR		
	43	47.80	50.30	52.80	1	69.4	5.8	0.001	0.1	PTVS43V51UR	PTVS43V51UTR		
	45	50.00	52.65	55.30	1	72.7	5.5	0.001	0.1	PTVS45V51UR	PTVS45V51UTR		
	48	53.30	56.10	58.90	1	77.4	5.2	0.001	0.1	PTVS48V51UR	PTVS48V51UTR		
	51	56.70	59.70	62.70	1	82.4	4.9	0.001	0.1	PTVS51V51UR	PTVS51V51UTR		
	54	60.00	63.15	66.30	1	87.1	4.6	0.001	0.1	PTVS54V51UR	PTVS54V51UTR		
	58	64.40	67.80	71.20	1	93.6	4.3	0.001	0.1	PTVS58V51UR	PTVS58V51UTR		
	60	66.70	70.20	73.70	1	96.8	4.1	0.001	0.1	PTVS60V51UR	PTVS60V51UTR		
	64	71.10	74.85	78.60	1	103.0	3.9	0.001	0.1	PTVS64V51UR	PTVS64V51UTR		

[1] 10/1000µs according to IEC 61643-3:21

ESD protection, TVS, filtering  
and signal conditioning

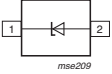
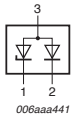
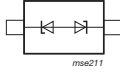
TVS 600 W

Power (W) (10/1000 µs waveform) [1]	$V_{RWM}$ (V)	$V_{BR\ min}$ (V) @ $I_R$	$V_{BR\ typ}$ (V) @ $I_R$	$V_{BR\ max}$ (V) @ $I_R$	$I_R$ (mA)	$V_{CL\ max}$ (V) @ $I_{PP}$ [1]	$I_{PP}$ (A) [1]	$I_{RM\ typ}$ (µA) @ $V_{RWM}$	$I_{RM\ max}$ (µA) @ $V_{RWM}$	Type ( $T_j$ max = 150 °C)	Type ( $T_j$ max = 185 °C)	Package	Size (mm)
600	3.5	5.20	5.60	6.00	10	8	75	5	600	PTVS3V3P1UP	PTVS3V3P1UTP		3.8 x 2.6 x 1.0
	5	6.40	6.70	7.00	10	9.2	65.2	5	400	PTVS5V0P1UP	PTVS5V0P1UTP		
	6	6.67	7.02	7.37	10	10.3	58.3	5	400	PTVS6V0P1UP	PTVS6V0P1UTP		
	6.5	7.22	7.60	7.98	10	11.2	53.6	5	250	PTVS6V5P1UP	PTVS6V5P1UTP		
	7	7.78	8.20	8.60	10	12	50	3	100	PTVS7V0P1UP	PTVS7V0P1UTP		
	7.5	8.33	8.77	9.21	1	12.9	46.5	0.2	50	PTVS7V5P1UP	PTVS7V5P1UTP		
	8	8.89	9.36	9.83	1	13.6	44.1	0.03	25	PTVS8V0P1UP	PTVS8V0P1UTP		
	8.5	9.44	9.92	10.40	1	14.4	41.7	0.01	10	PTVS8V5P1UP	PTVS8V5P1UTP		
	9	10.00	10.55	11.10	1	15.4	39	0.005	5	PTVS9V0P1UP	PTVS9V0P1UTP		
	10	11.10	11.70	12.30	1	17	35.3	0.005	2.5	PTVS10VP1UP	PTVS10VP1UTP		
	11	12.20	12.85	13.50	1	18.2	33	0.005	2.5	PTVS11VP1UP	PTVS11VP1UTP		
	12	13.30	14.00	14.70	1	19.9	30.2	0.005	2.5	PTVS12VP1UP	PTVS12VP1UTP		
	13	14.40	15.15	15.90	1	21.5	27.9	0.001	0.1	PTVS13VP1UP	PTVS13VP1UTP		
	14	15.60	16.40	17.20	1	23.2	25.9	0.001	0.1	PTVS14VP1UP	PTVS14VP1UTP		
	15	16.70	17.60	18.50	1	24.4	24.6	0.001	0.1	PTVS15VP1UP	PTVS15VP1UTP		
	16	17.80	18.75	19.70	1	26	23.1	0.001	0.1	PTVS16VP1UP	PTVS16VP1UTP		
	17	18.90	19.90	20.90	1	27.6	21.7	0.001	0.1	PTVS17VP1UP	PTVS17VP1UTP		
	18	20.00	21.00	22.10	1	29.2	20.5	0.001	0.1	PTVS18VP1UP	PTVS18VP1UTP		
	20	22.20	23.35	24.50	1	32.4	18.5	0.001	0.1	PTVS20VP1UP	PTVS20VP1UTP		
	22	24.40	25.60	26.90	1	35.5	16.9	0.001	0.1	PTVS22VP1UP	PTVS22VP1UTP		
	24	26.70	28.10	29.50	1	38.9	15.4	0.001	0.1	PTVS24VP1UP	PTVS24VP1UTP		
	26	28.90	30.40	31.90	1	42.1	14.2	0.001	0.1	PTVS26VP1UP	PTVS26VP1UTP		
	28	31.10	32.80	34.40	1	45.4	13.2	0.001	0.1	PTVS28VP1UP	PTVS28VP1UTP		
	30	33.30	35.10	36.80	1	48.4	12.4	0.001	0.1	PTVS30VP1UP	PTVS30VP1UTP		
	33	36.70	38.70	40.60	1	53.3	11.3	0.001	0.1	PTVS33VP1UP	PTVS33VP1UTP		
	36	40.00	42.10	44.20	1	58.1	10.3	0.001	0.1	PTVS36VP1UP	PTVS36VP1UTP		
	40	44.40	46.80	49.10	1	64.5	9.3	0.001	0.1	PTVS40VP1UP	PTVS40VP1UTP		
	43	47.80	50.30	52.80	1	69.4	8.6	0.001	0.1	PTVS43VP1UP	PTVS43VP1UTP		
	45	50.00	52.65	55.30	1	72.7	8.3	0.001	0.1	PTVS45VP1UP	PTVS45VP1UTP		
	48	53.30	56.10	58.90	1	77.4	7.8	0.001	0.1	PTVS48VP1UP	PTVS48VP1UTP		
	51	56.70	59.70	62.70	1	82.4	7.3	0.001	0.1	PTVS51VP1UP	PTVS51VP1UTP		
	54	60.00	63.15	66.30	1	87.1	6.9	0.001	0.1	PTVS54VP1UP	PTVS54VP1UTP		
58	64.40	67.80	71.20	1	93.6	6.4	0.001	0.1	PTVS58VP1UP	PTVS58VP1UTP			
60	66.70	70.20	73.70	1	96.8	6.2	0.001	0.1	PTVS60VP1UP	PTVS60VP1UTP			
64	71.10	74.85	78.60	1	103	5.8	0.001	0.1	PTVS64VP1UP	PTVS64VP1UTP			

[1] 10/1000µs according to IEC 61643-321

# Low capacitance ESD protection for high-speed interfaces




























Products in **bold red** are under development

Unid/Rectional	Bid/Rectional	V <sub>FWM</sub> (V)	C <sub>line typ</sub> (pF)	ESD rating max (kV) [1]	Configuration	Type	Package	Size (mm)		
1	0	5	0.45	20		PESD5V0C1USF	DSN0603-2 (SOD962)	0.6 x 0.3 x 0.3		
		6.5	0.45	20		PESD6V5C1USF				
		5	0.6	10		PESD5V0F1USF	DFN1006D-2 (SOD882D)	1.0 x 0.6 x 0.37		
		5	0.95	8		PESD5V0X1ULD				
			1.55	15		PESD5V0X1UALD				
		16	0.83	8		PESD16VX1UL	DFN1006-2 (SOD882)	1.0 x 0.6 x 0.48		
		5	0.95	8		PESD5V0X1UB	SOD523 (SC-79)	1.2 x 0.8 x 0.6		
			1.55	15		PESD5V0X1UAB				
		3.3	0.6	30	0.6	30		PESD3V3U1UT	SOT23	2.9 x 1.3 x 1.0
								PESD5V0U1UT		
								PESD12VU1UT		
								PESD15VU1UT		
								PESD24VU1UT		
		0	1	5	0.17	15		<b>PESD5V0H1BSN</b>	SOD992B	0.43 x 0.23 x 0.12
2.0	0.69			20	PESD2V0Y1BSF	DSN0603-2 (SOD962)		0.6 x 0.3 x 0.3		
2.5	0.25			15	PESD2V5Y1BSF					
2.8	0.1			10	PESD2V8R1BSF					
3.3	0.24			15	PESD3V3Y1BSF					
	0.2			20	PESD3V3C1BSF					
	0.28			20	PESD3V3Z1BSF					
	0.45			30	PESD3V3Z1BCSF					
	0.55			30	PESD3V3W1BCSF					
4.0	0.24			15	PESD4V0Y1BSF					
	0.28			20	PESD4V0Z1BSF					
	0.45			30	PESD4V0Z1BCSF					
	0.55			30	PESD4V0W1BCSF					
	5			0.1	10				PESD5V0R1BSF	
0.15				15	PESD5V0H1BSF					
0.2				20	PESD5V0C1BSF					
7				0.1	10				PESD7V0R1BSF	
				0.15	15				PESD7V0H1BSF	
	0.2			20	PESD7V0C1BSF					
5.5	0.25			10	PESD5V0F1BSF					
3.3	-			20	PESD5V0F1BRF					
	5.0				-				PESD3V3X1BCSF	
5	0.4			10	PESD5V0X1BCSF					
					PESD5V0F1BLD				DFN1006D-2 (SOD882D)	1.0 x 0.6 x 0.37
PESD5V0F1BRD										
3.3	1.3			9	PESD3V3X1BL				DFN1006-2 (SOD882)	1.0 x 0.6 x 0.48
5.5	0.4			10	PESD5V0F1BL					
5	0.49			8	PESD5V0X1BCL					
	0.85			15	PESD5V0X1BCAL					
	0.9			9	PESD5V0X1BL					
18	0.35			10	PESD18VF1BL					
24	0.3			10	PESD24VF1BL					
30	0.3			10	PESD30VF1BL					

ESD protection, TVS, filtering and signal conditioning

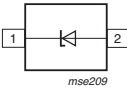
# Low capacitance ESD protection for high-speed interfaces

Products in **bold red** are under development

Unid/Rectional	Bid/Rectional	V <sub>RWM</sub> (V)	C <sub>line</sub> typ (pF)	ESD rating max (kV) [1]	Configuration	Type	Package	Size (mm)	
2	1	5	0.5	10		PESD5V0X2UMB	DFN1006B-3 (SOT883B) 	1.0 x 0.6 x 0.37	
						PESD5V0X2UM	DFN1006-3 (SOT883) 	1.0 x 0.6 x 0.48	
			PESD5V0X2UAMB	DFN1006B-3 (SOT883B) 		1.0 x 0.6 x 0.37			
			PESD5V0X2UAM	DFN1006-3 (SOT883) 		1.0 x 0.6 x 0.48			
			PESD5V0X1BT	SOT23 		2.9 x 1.3 x 1.0			
	0	80	0.6	30		NUP1301U	SOT323 	2.0 x 1.25 x 0.95	
						NUP1301	SOT23 	2.9 x 1.3 x 1.0	
						NUP1301QA	SOT1215 	1.0 x 1.0 x 0.4	
	0	2	4	0.26	20		<b>PUSB3BB2DF</b>	DFN0603-3 (SOT8013) 	0.62 x 0.32 x 0.25
	3	0	5.5	1	8		PRTR5V0U2X	SOT143B 	2.9 x 1.3 x 1.0
1.8				12	PRTR5V0U2AX				
1				8		PRTR5V0U2F	DFN1410-6 (SOT886) 	1.45 x 1.0 x 0.48	
4	0	3.3	0.75	25		PESD3V3X4UHM	DFN1308-6 (SOT8006) 	1.3 x 0.8 x 0.4	
						IP4220CZ6	SOT457 (SC-74) 	2.9 x 1.5 x 1.0	
			PRTR5V0U4D	2.9 x 1.5 x 1.0					
			PUSB2X4D						
		5.5	0.7	12	8		PUSB2X4Y	SOT363 (SC-88) 	2.0 x 1.25 x 0.95
							IP4283CZ10-TBR	DFN2510A-10 (SOT1176) 	2.5 x 1.0 x 0.48
							IP4294CZ10-TBR		
							PUSB3F96		
		PHDMI2F4							
		3.3	0.27	15		PUSB3FR4	PHDMI2FR4		
5	PUSB3AB4								
0	4	3.3	0.17		PHDMI2AB4				
					5				

# General purpose ESD protection devices

Types in **bold** represent new products

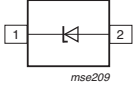

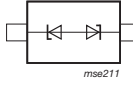

Number of protected lines		V <sub>RWM</sub> (V)	C <sub>line typ</sub> (pF)	C <sub>line max</sub> (pF)	I <sub>PP max</sub> (A) [1]	ESD rating max (kV) [1]	I <sub>R max</sub> (µA) @ V <sub>RWM</sub>	Configuration	Type	Package	Size (mm)
Unidirectional	Bidirectional										
1	0	5	35	42	3.5	30	0.1		PESD5V0S1USF	DSN0603-2 (SOD962)	0.6 x 0.3 x 0.3
		5.5	12	15.4	1.2	30	0.1		PESD5V0L1USF		
		3.3	2.6	3.1	-	9	0.1 (@ 3 V)		PESD3V3U1UL	DFN1006-2 (SOD882)	1.0 x 0.6 x 0.5
			34	40	4.5	30	0.3		PESD3V3L1UL		
			207	300	15	30	2		PESD3V3S1UL		
		5	2	2.6	-	9	0.1		PESD5V0U1UL		
			25	30	3.5	26	0.1		PESD5V0L1UL		
		5	152	200	15	30	1		PESD5V0S1UL		
		12	38	75	5	30	0.05		PESD12VS1UL		
		15	32	70	5	30	0.05		PESD15VS1UL		
		24	23	50	3	23	0.05		PESD24VS1UL		
		36	18	2.5	2.5	30	0.01		PESD36VS1UL		
		5	25	30	3.5	26	0.1		PESD5V0L1ULD	DFN1006D-2 (SOD882D)	1.0 x 0.6 x 0.4
			152	200	15	30	1		<b>PESD8V0S1ULD</b>		
		8	70	90	13	30	0.5		PESD12VS1ULD		
		12	38	75	5	30	0.05		PESD15VS1ULD		
		15	32	70	5	30	0.05		PESD24VS1ULD		
		24	23	50	3	23	0.05		PESD5Z2.5		
		3.3	2.6	3.1	-	9	0.1 (@ 3 V)		PESD3V3U1UB	SOD523 (SC-79)	1.2 x 0.8 x 0.6
			34	40	4.5	30	0.3		PESD3V3L1UB		
			172	200	20	30	0.05		PESD5Z3.3		
			207	300	18	30	2		PESD3V3S1UB		
		5	2	2.6	-	9	0.1		PESD5V0U1UB		
			25	30	3.5	26	0.1		PESD5V0L1UB		
			89	150	10	30	0.05		PESD5Z5.0		
			152	200	15	30	1		PESD5V0S1UB		
		6	78	150	10	30	0.01		PESD5Z6.0		
		7	69	150	10	30	0.01		PESD5Z7.0		
		12	35	75	6	30	0.01		PESD5Z12		
			38	75	5	30	0.05		PESD12VS1UB		
		15	32	70	5	30	0.05		PESD15VS1UB		
		24	23	50	3	23	0.05		PESD24VS1UB		

ESD protection, TVS, filtering and signal conditioning

[1] 10/1000µs according to IEC 61643-3:21

General purpose ESD protection devices

Types in **bold** represent new products

Number of protected lines		V <sub>RWM</sub> (V)	C <sub>line typ</sub> (pF)	C <sub>line max</sub> (pF)	I <sub>PP max</sub> (A) [1]	ESD rating max (kV) [1]	I <sub>R max</sub> (µA) @ V <sub>RWM</sub>	Configuration	Type	Package	Size (mm)		
Unid/Rectional	Bid/Rectional												
1	0	3.3	2.6	3.1	-	9	0.1 (@ 3 V)		PESD3V3U1UA	 SOD323 (SC-76)	1.7 x 1.25 x 0.95		
		5	2	2.6	-	9	0.1		PESD5V0U1UA				
			25	30	3.5	26	0.1					PESD5V0L1UA	
			480	530	47	30	4						
		12	160	180	22.5	30	0.1		PESD12VS1UA				
		24	23	50	3	23	0.05		PESD24VS1UA				
		5	480	530	47	30	4		PESD5V0S1UJ				
		12	160	180	22.5	30	0.1		PESD12VS1UJ				
		36	18	30	2.5	30	0.01		PESD36VS1UJ				
		0	1	5.5	8.6	10.3	-		25			0.1	
3.3	5.5			6	5.4	20	0.1	PESD3V3U1BCSF					
	8.5			10	7.1	30	0.1	PESD3V3V1BCSF					
5.5	5.3			6	1	20	0.1	PESD5V0V1BCSF					
					2	20	0.1	PESD5V0V1BDSF					
	4.5			1	15	0.1	PESD5V0V1BSF						
	12			15.4	3	30	0.1	PESD5V0L1BSF					
	35			45	8	30	0.1	PESD5V0S1BSF					
12	17			19	6.1	30	0.05	PESD12VA-SF					
16	5.7			6.5	1.3	12	0.05	<b>PESD16VV1BSF</b>					
18	4			6	3	25	0.1	<b>PESD18VV1BBSF</b>					
3.3	101			-	18	30	2	PESD3V3L1BA					
5	75			-	15	30	1	PESD5V0L1BA					
12	19			-	5	30	0.05	PESD12VL1BA					
15	16			-	5	30	0.05	PESD15VL1BA					
24	11			-	3	23	0.05	PESD24VL1BA					
32	9			12	2.5	23	0.05	<b>PESD32VL1BA</b>					
36	9			12	2	18	0.05	<b>PESD36VL1BA</b>					
24	14			17	3.5	30	0.05	<b>PESD24VV1BA</b>					
27	13			17	3	30	0.05	<b>PESD27VV1BA</b>					
3.3	11			13	5	30	0.01	PESD3V3V1BL					
	22			30	10	30	0.05	PESD3V3T1BL					
	35			40	15	30	0.1	PESD3V3S1BL					
	65			78	34	30	0.05	PTVS3V3D1BAL					
4.5	65			78	34	30	0.05	PTVS4V5D1BL					
5	11			13	4.8	30	0.01	PESD5V0V1BL					
									 DFN1006-2 (SOD882)	1.7 x 1.25 x 0.95			

[1] 10/1000µs according to IEC 61643-321

# General purpose ESD protection devices

Number of protected lines		V <sub>RWM</sub> (V)	C <sub>line typ</sub> (pF)	C <sub>line max</sub> (pF)	I <sub>PP max</sub> (A) [1]	ESD rating max (kV) [1]	I <sub>R max</sub> (µA) @ V <sub>RWM</sub>	Configuration	Type	Package	Size (mm)			
Unid/Rectional	Bid/Rectional													
0	1	5	35	45	12	30	0.1		PESD5V0S1BL	DFN1006-2 (SOD882)	1.7 x 1.25 x 0.95			
		5.5	70	84	35	30	0.1		PTV55V5D1BL					
		12	17	25	7.8	30	0.01		PESD12VV1BL					
		3	20	25	10	30	0.1		PESD3V3T1BLD					
			11	13	4.8	30	0.01		DFN1006D-2 (SOD882D)	PESD5V0V1BLD				
			35	45	12	30	0.1			PESD5V0S1BLD				
			11	13	4.8	30	0.01			PESD5V0V1BB				
			35	45	12	30	0.1		SOD523 (SC-79)	PESD5V0S1BB				
			11	13	4.8	30	0.01			PESD5V0V1BA				
			35	45	12	12	0.1			PESD5V0S1BA				
			5	2.9	3.5	-	10		0.1		PESD5V0U1BL	DFN1006-2 (SOD882)	DFN1006D-2 (SOD882D)	1.7 x 1.25 x 0.95
											PESD5V0U1BLD			
											PESD5V0U1BB	SOD523 (SC-79)		
											PESD5V0U1BA	SOD323 (SC-76)		
		2	1	3.3	22	28	3		15	0.03		PESD3V3L2UM	DFN1006-3 (SOT883)	1.0 x 0.6 x 0.5
							2.5		15	0.025		PESD5V0L2UM		
5	16			19	2.5	15	0.025	PESD5V0L2UMB	DFN1006B-3 (SOT883B)	1 x 0.6 x 0.37				
	3.3			207	300	18	30	2		PESD3V3S2UT	SOT23	2.9 x 1.3 x 1		
	5.2			152	200	15	30	1		PESD5V2S2UT				
	12			38	75	5	30	1		PESD12VS2UT				
	15			32	70	5	30	1		PESD15VS2UT				
	24			23	50	3	23	1		PESD24VS2UT				
	36			17	35	2.5	30	1 (@ 30 V)		PESD36VS2UT				
	42			17	20	1.8	23	0.05		PESD42S2UT				
	3.3			207	300	18	30	2		PESD3V3S2UAT				
	5			152	200	15	30	1	PESD5V0S2UAT					
	15			32	70	5	30	0.05	PESD15VS2UAT					
	24			23	50	3	23	0.05	PESD24VS2UAT					
	5			38	46	6.5	30	0.09 (@ 4 V)		PESD5V0L2UU	SOT323 (SC-70)	2 x 1.25 x 0.95		
	6			34	40	5.5	30	0.018 (@ 4.3 V)		PESD6V0L2UU				
0	2			3.3	101	-	15	30	0.05		PESD3V3L2BT	SOT23	2.9 x 1.3 x 1	
				5	75	-	13	30	0.05		PESD5V0L2BT			
				12	19	-	5	30	0.1		PESD12VL2BT			

ESD protection, TVS, filtering and signal conditioning

[1] 10/1000µs according to IEC 61643-3:21

# General purpose ESD protection devices




















Types in **bold** represent new products

Number of protected lines		$V_{RWM}$ (V)	$C_{line}$ typ (pF)	$C_{line}$ max (pF)	$I_{PP}$ max (A) [1]	ESD rating max (kV) [1]	$I_R$ max ( $\mu$ A) @ $V_{RWM}$	Configuration	Type	Package	Size (mm)			
Unid/Rectional	Bid/Rectional													
0	2	15	16	-	5	30	0.05		PESD15VL2BT		2.9 x 1.3 x 1			
		24	11	-	3	23	0.05		PESD24VL2BT					
		24	14	17	3.5	30	0.05		<b>PESD24VV2BT</b>					
		27	13	17	3	30	0.05		<b>PESD27VV2BT</b>					
		35	45	12	30	0.1	PESD5V0S2BT							
		2.9	3.5	-	10	0.1	PESD5V0U2BT							
		18	20	9	30	0.01	PESD5V0U2BM							
		2.9	3.5	-	10	0.1	PESD5V0V2BM							
		18	20	9	30	0.01	PESD5V0U2BMB							
		35	45	35	30	0.1	PESD5V0V2BMB							
4	3	3.3	22	28	3	20	0.3		PESD3V3L4UF		1.45 x 1 x 0.5			
			110	300	10	30	1 (@ 3 V)		PESD3V3S4UF					
		5	16	19	2.5	20	0.025		PESD5V0L4UF					
			85	220	10	30	0.1 (@ 4.3 V)		PESD5V0S4UF					
		3	200	240	-	8	2	BZA856A	SOT353 (SC-88A)		2 x 1.25 x 0.95			
		3.3	22	28	3	20	0.3	PESD3V3L4UG						
		5	16	19	2.5	20	0.025	PESD5V0L4UG						
		3	200	240	8	2	BZA456A	SOT457 (SC-74)				2.9 x 1.5 x 1		
		3.3	215	300	20	30	0.8	PESD3V3S4UD						
		5	165	220	20	30	0.2	PESD5V0S4UD						
		15	37	48	-	8	0.1	BZA420A						
		24	40	70	4	23	0.01	PESD24V54UD						
		0	4	3.3	22	28	2.5	20	0.3		<b>PESD3V3L4BHC</b>	DFN1308-6 (SOT8006)	1.3 x 0.8 x 0.4	
											PESD5V0U4BF	DFN1410-6 (SOT886)		
5	16			19	2.5	20	0.025	BZA408B	SOT457 (SC-74)			2.9 x 1.5 x 1.0		
								45	75					-
0	5	3.3	22	28	2.5	20	0.3		PESD3V3L5UF		1.45 x 1 x 0.5			
									5			16	19	2.5
		3.3	22	28	2.5	20	0.3		PESD3V3L5UY			SOT363 (SC-88)		2 x 1.25 x 0.95
		5	16	19	2.5	20	0.025		PESD5V0L5UY					
		3.3	215	300	20	30	0.8	PESD3V3S5UD	SOT457 (SC-74)		2.9 x 1.5 x 1.0			
		5	165	220	20	30	0.2	PESD5V0S5UD						
		24	45	70	4	23	0.015	PESD24V5SUD						
		5	2.9	3.5	-	10	0.1	PESD5V0U5BF	DFN1410-6 (SOT886)		1.45 x 1 x 0.5			




## Common mode filters with integrated protection

Types in **bold red** are in development, types in **bold** represent new products

Interface	Number of protected lines	Type	Differential Mode 3 dB frequency (typ.)	range of CM rejection > -10 dB	V <sub>RWM</sub> (V)	IEC61000-4-2 ESD rating (kV)	IPP (A) 8/20 μs	Channel series resistance (Ω)	Package	Size (mm)
USB2.0	1	IP3319CX6	1.5	0.14 - 5.8	5.5	15	6	6	WLCSP6 	0.95 x 1.34 x 0.6
USB3.2	1	<b>PCMF1USB3BA/C</b>	10 GHz	1.85 - 8.9	4	15	7.5	2.2	WLCSP5 	0.8 x 1.2 x 0.5
	2	<b>PCMF2USB3BA/C</b>							WLCSP10 	1.6 x 1.2 x 0.5
	3	<b>PCMF3USB3BA/C</b>							WLCSP15 	2.4 x 1.2 x 0.5
	1	PCMF1USB3B/C	8.1 GHz	1.24 - 10	4	20	9.5	2.6	WLCSP5 	0.8 x 1.2 x 0.5
	2	PCMF2USB3B/C							WLCSP10 	1.6 x 1.2 x 0.5
	3	PCMF3USB3B/C							WLCSP15 	2.4 x 1.2 x 0.5
	1	PCMF1USB3S	6 GHz	0.63 - 8.3	5	15	7	3	WLCSP5 	0.8 x 1.2 x 0.5
	2	PCMF2USB3S							WLCSP10 	1.6 x 1.2 x 0.5
	3	PCMF3USB3S							WLCSP15 	2.4 x 1.2 x 0.5
	1	<b>PESD1USB3B</b>	16.1 GHz	-	4	20	9.5	-	WLCSP5 	0.8 x 1.2 x 0.5
	2	<b>PESD2USB3B</b>							WLCSP10 	1.6 x 1.2 x 0.5
	3	<b>PESD3USB3B</b>							WLCSP15 	2.4 x 1.2 x 0.5
	1	PESD1USB3S	17 GHz	-	5	15	8	-	WLCSP5 	0.8 x 1.2 x 0.5
	2	PESD2USB3S							WLCSP10 	1.6 x 1.2 x 0.5
	3	PESD3USB3S							WLCSP15 	2.4 x 1.2 x 0.5
HDMI2.0	1	PCMF1HDMI2S	>6 GHz	0.63-8.3	5	15	7	3	WLCSP5 	0.8 x 1.2 x 0.5
	2	PCMF2HDMI2S							WLCSP10 	1.6 x 1.2 x 0.5
	3	PCMF3HDMI2S							WLCSP15 	2.4 x 1.2 x 0.5



ESD protection, TVS, filtering and signal conditioning


## RC low pass filters with integrated protection


Number of protected lines	Line small-signal equivalents			Digital interface clock speed (MHz)	Insertion loss S21 ~ -3 dB (MHz)	Type	Package	Size (mm)
	Rline (Ω)	Cline (pF)	Lline (nH)					
4	40	18	-	~100	300	IP4252CZ8-4-TTL	DFN1714-8 (SOT1166)	1.7 x 1.35 x 0.52
	100	45	-	~40	130	IP4254CZ8-4-TTL		
8	40	18	-	~100	300	IP4252CZ16-8-TTL	DFN3314-16 (SOT1168)	3.3 x 1.35 x 0.53
	100	45	-	~40	130	IP4254CZ16-8-TTL		
		15	-	~110	330	IP4251CZ16-8-TTL		

## Transient Voltage Surge Suppressor (TVS)

### TVS diodes for mobile applications

$V_{RWM}$	$V_{BR\ min}$	$V_{BR\ max}$	$I_{PPM\ 8/20\mu s}$	$V_{CL\ 8/20\mu s}$	Type	Package	Size
3.3	4.7	-	34	13.2	PTVS3V3D1BAL	DFN1006-2 (SOD882) 	1.0 x 0.6 x 0.48
4.5	4.7	-	34	13.2	PTVS4V5D1BL		
5.5	5.6	7.6	35	12.2	PTVS5V5D1BL		
3.3	3.8	6.8	70	11	PTVS3V3Z1BSC	DSN1006-2 (SOD993B) 	1.0 x 0.6 x 0.27
5	5.5	8.3	60	12	PTVS5V0Z1BSC		

$P_{PPM\ 10/1000\mu s}$	$V_{RWM}$	$V_{BR\ min}$	$V_{BR\ max}$	$I_{PPM\ 8/20\mu s}$	$V_{CL\ 8/20\mu s}$	$I_{PPM\ 10/1000\mu s}$	$V_{CL\ 10/1000\mu s}$	Type	Package	Size
300	7.5	8.33	9.21	178	19.7	23.3	12.9	PTVS7V5U1UPA	DFN2020-3 (SOT1061) 	2.0 x 2.0 x 0.62
	10	11.1	12.3	148	23	17.6	17	PTVS10VU1UPA		
	12	13.3	14.7	131	25.2	15.1	19.9	PTVS12VU1UPA		
	15	16.7	18.5	111	28.8	12.3	24.4	PTVS15VU1UPA		
	18	20	22.1	97	32	10.3	29.2	PTVS18VU1UPA		
	20	22.2	24.5	98.5	38.7	9.2	32.5	PTVS20VU1UPA		
	22	24.4	26.9	88.5	41	8.4	35.5	PTVS22VU1UPA		
	24	26.7	29.5	79	44.2	7.7	38.8	PTVS24VU1UPA		
	26	28.9	31.9	69	43.5	7	43	PTVS26VU1UPA		

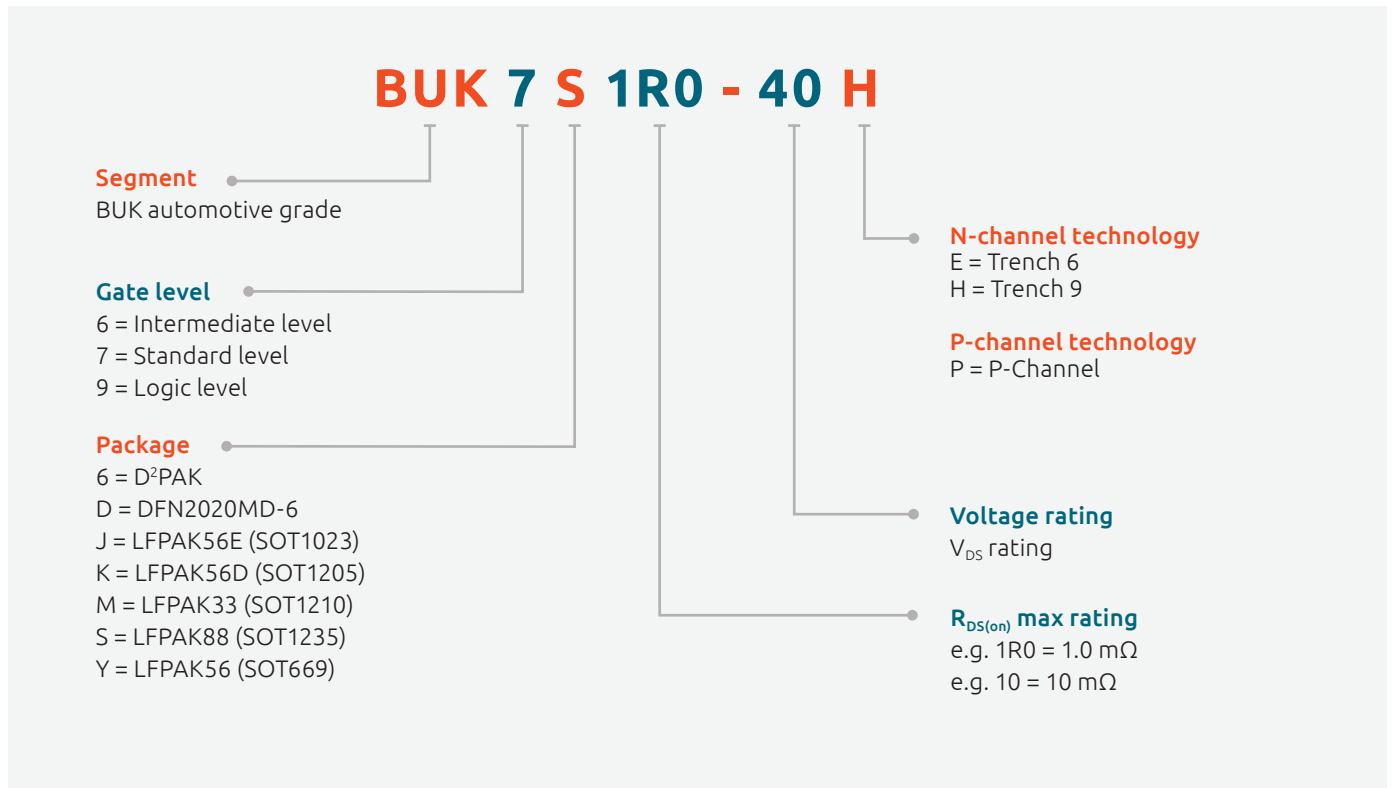
$V_{RWM}\ (V)$	$V_{br\ min}\ (V)$	$V_{br\ max}\ (V)$	8/20 $\mu s$ pulse		10/1000 $\mu s$ pulse		$I_{Rm\ typ}\ @\ V_{RWM}\ (nA)$	$I_{Rm\ max}\ @\ V_{RWM}\ (nA)$	$R_{dyn}\ (TLP)$	Type	Package	Size
			$V_{cl}\ @\ I_{ppm}\ (V)_{max}$	$V_{CL}\ @\ I_{ppm}\ (A)$	$V_{cl}\ @\ I_{ppm}\ (V)_{max}$	$I_{ppm}\ (A)$						
5	6.4	7.8	19.4	100	12	20	25	1000	0.1	PTVS5V0Z1USKP	DSN1608-2 (SOD964) 	1.6 x 0.8 x 0.27
			18	80	12	20	25	1000	0.06	PTVS5V0Z1USK		
7.5	8.33	9.65	22	100	13.5	17	1	200	0.08	PTVS7V5Z1USK		
10	11.1	12.9	27	75	18.2	12.5	0.1	200	0.11	PTVS10VZ1USK		
12	13.1	15.4	29	65	21.8	10.5	0.1	200	0.11	PTVS12VZ1USK		
15	16.7	19.4	26	52	27.4	7.5	0.1	200	0.13	PTVS15VZ1USK		
18	20	23.2	44	41	32.8	6.4	0.1	200	0.17	PTVS18VZ1USK		
20	22.2	25.4	48.3	41	36.9	6	1	200	0.2	PTVS20VZ1USK		
22	24.4	26.9	51	39	40	5	0.1	200	0.2	PTVS22VZ1USK		
26	28.9	33.4	57.5	32	46	4.5	0.1	200	0.15	PTVS26VZ1USK		





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## Automotive grade MOSFETs nomenclature



## N-channel 30V automotive power MOSFETs

Package name	Type number	V <sub>DS</sub> [max] (V)	R <sub>DS(on)</sub> [max] @ 10 V (mΩ)	R <sub>DS(on)</sub> [max] @ 5 V (mΩ)	I <sub>D</sub> [max] @ 25 °C (A)	R <sub>th(j-mb)</sub> [max] (K/W)
LFPAK56; Power-SO8 (SOT669)	BUK9Y07-30B	30	6	7	75	1.42
	BUK9Y22-30B	30	19	22	38	2.53
	BUK7Y20-30B	30	20		40	2.53
LFPAK56D (SOT1205)	BUK9K5R1-30E	30	4.4	5.3	40	2.21
	BUK9K5R6-30E	30	4.7	5.8	40	2.36
	BUK7K5R1-30E	30	5.1		40	2.21
	BUK7K5R6-30E	30	5.6		40	2.36
LFPAK33 (SOT1210)	BUK9M5R2-30E	30	4.1	5.2	70	1.89
	BUK9M6R6-30E	30	5.3	6.6	70	2
	BUK9M10-30E	30	7.8	10	54	2.75
	BUK9M17-30E	30	14	17	37	3.4

## N-channel 40V automotive power MOSFETs

Types in **bold red** are in development, types in **bold** represent new products

Package name	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m $\Omega$ )	$R_{DS(on)}$ [max] @ 5 V (m $\Omega$ )	$I_D$ [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)	
TO-220AB (SOT78)	BUK753R1-40E	40	3.1		100	0.64	
	BUK758R3-40E	40	7.4		75	1.56	
LFPK88 (SOT1235)	<b>BUK750R5-40H</b>	40	0.55				
	<b>BUK750R7-40H</b>	40	0.7		425	0.4	
	<b>BUK750R9-40H</b>	40	0.9		375	0.4	
	<b>BUK751R0-40H</b>	40	1		325	0.4	
	<b>BUK751R2-40H</b>	40	1.2				
	<b>BUK751R5-40H</b>	40	1.5				
	<b>BUK752R0-40H</b>	40	2.0				
	<b>BUK752R5-40H</b>	40	2.5				
D <sup>2</sup> PAK (SOT404)	BUK961R6-40E	40	1.4	1.6	120	0.43	
	BUK761R6-40E	40	1.6		120	0.43	
	BUK761R7-40E	40	1.6		120	0.46	
	BUK762R0-40E	40	2		120	0.51	
	BUK962R6-40E	40	2.4	2.8	100	0.57	
	BUK762R6-40E	40	2.6		100	0.57	
	BUK963R1-40E	40	2.7	3.1	100	0.64	
	BUK964R1-40E	40	3.5	4.1	75	0.82	
	BUK764R0-40E	40	4		75	0.82	
	BUK965R4-40E	40	4.4	5.4	75	1.09	
	BUK765R3-40E	40	4.9		75	1.09	
	BUK768R1-40E	40	7.2		75	1.56	
	I <sup>2</sup> PAK (SOT226)	BUK7E1R8-40E	40	1.8		120	0.43
		BUK7E1R9-40E	40	1.9		120	0.46
BUK7E8R3-40E		40	7.4		75	1.56	
LFPK56E (SOT1023)	BUK9J0R9-40H	40	0.94	1.2	220	0.3	
	BUK7J1R0-40H	40	1		220	0.3	
	BUK7J1R4-40H	40	1.4		120	0.38	
LFPK56; Power-SO8 (SOT669)	BUK9Y1R3-40H	40	1.3	1.8	190	0.38	
	BUK7Y1R4-40H	40	1.4		190	0.38	
	BUK9Y1R6-40H	40	1.6	2.2	120	0.51	
	BUK7Y1R7-40H	40	1.7		120	0.51	
	BUK9Y1R9-40H	40	1.9	2.6	120	0.69	
	BUK7Y2R0-40H	40	2		120	0.69	
	BUK9Y2R4-40H	40	2.4	3.2	120	0.79	
	BUK9Y3R0-40E	40	2.5	3	100	0.77	
	BUK7Y2R5-40H	40	2.5		120	0.79	
	BUK9Y2R8-40H	40	2.8	3.9	120	0.87	
	BUK7Y3R0-40H	40	3		120	0.87	
	BUK7Y3R5-40H	40	3.5		120	1.3	
	BUK7Y3R5-40E	40	3.5		100	0.9	
	BUK9Y3R5-40E	40	3.6	3.8	100	0.9	
	BUK9Y4R4-40E	40	3.7	4.4	100	1.02	
	BUK7Y4R4-40E	40	4.4		100	1.02	
	BUK9Y7R6-40E	40	6	7.6	79	1.58	
	<b>BUK9Y6R5-40H</b>	40	6.5	7.9			
	<b>BUK9Y7R0-40H</b>	40	7				
	<b>BUK7Y7R2-40H</b>	40	7.2				
<b>BUK7Y7R6-40H</b>	40	7.6					
BUK7Y7R6-40E	40	7.6		79	1.58		
BUK9Y12-40E	40	10	12	52	2.31		
BUK7Y12-40E	40	12		52	2.31		
BUK9Y21-40E	40	17	21	33	3.33		
BUK7Y21-40E	40	21		33	3.33		
BUK9Y29-40E	40	25	29	25	4.03		
BUK7Y29-40E	40	29		26	4.03		




## N-channel 40V automotive power MOSFETs

types in **bold** represent new products

Package name	Type number	V <sub>DS</sub> [max] (V)	R <sub>DS(on)</sub> [max] @ 10 V (mΩ)	R <sub>DS(on)</sub> [max] @ 4.5 V or 5 V (mΩ)	I <sub>D</sub> [max] @ 25 °C (A)	R <sub>th(j-mb)</sub> [max] (K/W)
LFPK56D (SOT1205)	BUK7K6R2-40E	40	5.8		40	2.21
	BUK9K6R2-40E	40	6	6.2	40	2.21
	BUK9K6R8-40E	40	6.1	7.2	40	2.36
	BUK7K6R8-40E	40	6.8			2.36
	BUK9K8R7-40E	40	8	9.4	30	2.84
	BUK7K8R7-40E	40	8.5			2.84
	BUK9K18-40E	40	16	20	30	3.96
	BUK7K18-40E	40	19		24	3.96
	BUK9K25-40E	40	24	29	18	4.68
	BUK7K25-40E	40	25			4.68
LFPK33 (SOT1210)	<b>BUK7M3R3-40H</b>	40	3.3		80	1.48
	<b>BUK9M3R3-40H</b>	40	3.3	4.2	80	1.48
	<b>BUK7M4R3-40H</b>	40	4.3		95	
	<b>BUK9M4R3-40H</b>	40	4.3	5.5	95	
	<b>BUK7M5R0-40H</b>	40	5		85	
	<b>BUK9M5R0-40H</b>	40	5	6.4	85	
	<b>BUK7M6R0-40H</b>	40	6		50	2.14
	<b>BUK9M6R0-40H</b>	40	6	7.7	50	2.14
	BUK7M6R3-40E	40	6.3		70	1.89
	<b>BUK7M6R7-40H</b>	40	6.7		50	2.32
	<b>BUK9M6R7-40H</b>	40	6.7	8.6	50	2.32
	BUK7M8R0-40E	40	8		69	2
	<b>BUK7M8R5-40H</b>	40	8.5		40	2.56
	<b>BUK9M8R5-40H</b>	40	8.5	11	40	2.56
	BUK7M10-40E	40	10		56	2.43
	BUK7M12-40E	40	12		48	2.75
	<b>BUK7M9R5-40H</b>	40	9.5		40	2.74
	<b>BUK9M9R5-40H</b>	40	9.5	12	40	2.74
	BUK7M21-40E	40	21		33	3.4
	<b>BUK7M11-40H</b>	40	11		35	3
	<b>BUK9M11-40H</b>	40	11	14	35	3
	BUK7M45-40E	40	45		19	4.8
	BUK9M14-40E	40	11	14	44	2.75
	BUK9M24-40E	40	20	24	30	3.4
	<b>BUK7M15-40H</b>	40	15		30	3.44
	<b>BUK9M15-40H</b>	40	15	19	30	3.44
	<b>BUK7M20-40H</b>	40	20		25	3.96
	<b>BUK9M20-40H</b>	40	20	25	25	3.96
	BUK9M52-40E	40	40	52	18	4.8
	BUK9M7R2-40E	40	5.8	7.2	70	1.89
	BUK9M9R1-40E	40	7.3	9.1	64	2
	BUK9M11-40E	40	9	11	53	2.43



## N-channel 55V-60V automotive power MOSFETs





Package name	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m $\Omega$ )	$R_{DS(on)}$ [max] @ 5 V (m $\Omega$ )	$I_b$ [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)	
TO-220AB (SOT78)		BUK954R8-60E	60	4.5	4.9	100	0.64
		BUK7610-55AL	55	10		75	0.5
D <sup>2</sup> PAK (SOT404)		BUK9620-55A	55	18	20	54	1.2
		BUK7620-55A	55	20		54	1.2
		BUK9624-55A	55	22	24	46	1.4
		BUK9635-55A	55	32	35	34	1.8
		BUK7635-55A	55	35		35	1.7
		BUK9675-55A	55	68	75	20	2.4
		BUK7675-55A	55	75		20	2.4
		BUK962R5-60E	60	2.3	2.5	120	0.43
		BUK762R4-60E	60	2.4		120	0.43
		BUK962R8-60E	60	2.5	2.8	120	0.46
		BUK762R6-60E	60	2.6		120	0.46
		BUK963R3-60E	60	3	3.3	120	0.51
		BUK763R1-60E	60	3.1		120	0.51
		BUK964R2-60E	60	3.9	4.2	100	0.57
		BUK763R9-60E	60	3.9		100	0.57
		BUK964R8-60E	60	4.4	4.8	100	0.64
		BUK764R4-60E	60	4.5		100	0.64
		BUK966R5-60E	60	5.9	6.5	75	0.82
		BUK766R0-60E	60	6		75	0.82
		BUK969R0-60E	60	8	9	75	1.09
		BUK768R3-60E	60	8.3		75	1.09
		BUK9614-60E	60	13	14	56	1.56
		BUK7613-60E	60	13		58	1.56
I <sup>2</sup> PAK (SOT226)		BUK7E2R6-60E	60	2.6		120	0.43
		BUK7E3R5-60E	60	3.5		120	0.51
		BUK7E4R6-60E	60	4.6		100	0.64

## N-channel 55V-60V automotive power MOSFETs




Products in **bold red** are under development

Package name	Type number	V <sub>DS</sub> [max] (V)	R <sub>DS(on)</sub> [max] @ 10 V (mΩ)	R <sub>DS(on)</sub> [max] @ 5 V (mΩ)	I <sub>D</sub> [max] @ 25 °C (A)	R <sub>th(j-mb)</sub> [max] (K/W)
LFPAK56; Power-SO8 (SOT669)	BUK9Y4R8-60E	60	4.1	4.8	100	0.63
	BUK7Y4R8-60E	60	4.8		100	0.63
	BUK9Y6R0-60E	60	5.2	6	100	0.77
	BUK9Y7R2-60E	60	5.6	7.2	100	0.9
	BUK7Y6R0-60E	60	6		100	0.77
	BUK7Y7R2-60E	60	7.2		100	0.9
	BUK9Y8R7-60E	60	7.5	8.7	86	1.02
	BUK7Y8R7-60E	60	8.7		87	1.02
	BUK7Y15-60E	60	15		53	1.59
	BUK9Y25-60E	60	22	25	34	2.31
	BUK7Y25-60E	60	25		34	2.31
	BUK9Y43-60E	60	38	43	22	3.33
	BUK7Y43-60E	60	43		22	3.33
	BUK9Y59-60E	60	52	59	17	4.03
	BUK7Y59-60E	60	59		17	4.03
LFPAK56D (SOT1205)	BUK7K12-60E	60	9.3			2.21
	BUK7K13-60E	60	10		40	2.36
	BUK9K12-60E	60	11	12	35	2.21
	BUK9K13-60E	60	12	13	40	2.36
	BUK7K17-60E	60	14		30	2.84
	BUK7K35-60E	60	30		21	3.96
	BUK9K35-60E	60	32	35	22	3.96
	BUK7K52-60E	60	45		15	4.68
BUK9K52-60E	60	49	55	16	4.68	
LFPAK33 (SOT1210)	BUK7M9R9-60E	60	9.9		60	1.89
	BUK9M12-60E	60	11	12	54	1.89
	BUK7M12-60E	60	12		53	2
	BUK9M15-60E	60	13	15	47	2
	BUK7M15-60E	60	15		43	2.43
	BUK9M19-60E	60	17	19	38	2.43
	BUK7M19-60E	60	19		36	2.75
	BUK9M24-60E	60	21	24	32	2.75
	BUK7M33-60E	60	33			3.4
	BUK9M42-60E	60	37	42	22	3.4
	BUK7M42-60E	60	42		20	4.17
	BUK9M53-60E	60	46	53	17	4.17
	BUK7M67-60E	60	67		14	4.8
BUK9M85-60E	60	73	85	13	4.8	
LFPAK88 (SOT1235)	<b>BUK9S9R0-60E</b>	60		9		
SOT223	BUK9832-55A/CU	55	29	32	12	15
	BUK9880-55A/CU	55	73	80	7	15
	BUK7880-55A/CU	55	80		7	15
	BUK98150-55A/CU	55	137	150	5.5	
	BUK78150-55A/CU	55	150		5.5	

## N-channel 75V-80V automotive power MOSFETs

Package name	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m $\Omega$ )	$R_{DS(on)}$ [max] @ 5 V (m $\Omega$ )	$I_b$ [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
D <sup>2</sup> PAK (SOT404) 	BUK7613-75B	75	13		75	0.95
	BUK9616-75B	75	14	16	67	0.95
	BUK763R8-80E	80	3.8		120	0.43
	BUK964R2-80E	80	4	4.2	120	0.43
	BUK764R2-80E	80	4.2		120	0.46
	BUK964R7-80E	80	4.5	4.7	120	0.46
	BUK769R6-80E	80	9.6		75	0.82
	BUK9611-80E	80	10	11	75	0.82
LFPAK56; Power-SO8 (SOT669) 	BUK7Y7R8-80E	80	7.8		100	0.63
	BUK9Y8R5-80E	80	8	8.5	100	0.63
	BUK7Y9R9-80E	80	9.9		89	0.77
	BUK9Y11-80E	80	10	11	84	0.77
	BUK9Y14-80E	80	14	15	62	1.02
	BUK7Y14-80E	80	14		65	1.02
	BUK9Y25-80E	80	25	27	37	1.58
	BUK7Y25-80E	80	25		39	1.58
	BUK9Y41-80E	80	41	45	24	2.33
	BUK7Y41-80E	80	41		25	2.31
	BUK9Y72-80E	80	72	78	15	3.33
	BUK7Y72-80E	80	72		16	3.33
	BUK9Y107-80E	80	98	107	12	4.03
	BUK7Y98-80E	80	98		12	4.03
LFPAK56D (SOT1205) 	BUK7K15-80E	80	15		23	2.21
	BUK7K17-80E	80	17		21	2.36
	BUK7K23-80E	80	23		17	2.21
	BUK9K20-80E	80	17	19	23	2.84
	BUK9K22-80E	80	19	22	21	2.36
	BUK9K30-80E	80	26	30	17	2.84
LFPAK33 (SOT1210) 	BUK7M17-80E	80	17		43	1.89
	BUK9M23-80E	80	20	23	37	1.89
	BUK7M22-80E	80	22		37	2
	BUK7M27-80E	80	27		30	2.43
	BUK9M28-80E	80	28	28	33	2
	BUK9M35-80E	80	35	35	26	2.43

## N-channel 100V automotive power MOSFETs

Package name	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m $\Omega$ )	$R_{DS(on)}$ [max] @ 5 V (m $\Omega$ )	$I_b$ [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
TO-220AB (SOT78) 	BUK755R4-100E	100	5.2		120	0.43
D <sup>2</sup> PAK (SOT404) 	BUK765R0-100E	100	5		120	0.43
	BUK965R8-100E	100	5.6	5.8	120	0.43
	BUK768R1-100E	100	8.1		100	0.57
	BUK969R3-100E	100	8.9	9.3	100	0.57
	BUK7613-100E	100	13		72	0.82
	BUK9615-100E	100	14	15	66	0.82
	BUK7631-100E	100	31		34	1.56
	BUK9637-100E	100	36	37	31	1.56
	BUK9675-100A	100	72	75	23	1.5
	LFPAK56; Power-SO8 (SOT669) 	BUK9Y12-100E	100	12	12	85
BUK7Y12-100E		100	12		85	0.63
BUK9Y15-100E		100	15	15	69	0.77
BUK7Y15-100E		100	15		68	0.77
BUK9Y19-100E		100	18	19	56	0.9
BUK7Y19-100E		100	19		56	0.9
BUK9Y22-100E		100	22	22	49	1.02
BUK7Y22-100E		100	22		49	1.02
BUK9Y38-100E		100	38	38	30	1.58
BUK7Y38-100E		100	38		30	1.58
BUK9Y65-100E		100	64	65	19	2.31
BUK7Y65-100E		100	65		19	2.31
BUK9Y113-100E		100	110	113	12	3.33
BUK7Y113-100E		100	113		12	3.33
BUK9Y153-100E		100	146	153	9.4	4.03
BUK7Y153-100E		100	153		9.4	4.03

## N-channel 100V automotive power MOSFETs

Products in **bold red** are under development

Package name	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m $\Omega$ )	$R_{DS(on)}$ [max] @ 5 V (m $\Omega$ )	$I_D$ [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
LFPAK56D (SOT1205)	BUK7K29-100E	100	25		29.5	2.21
	BUK9K29-100E	100	27	29	30	2.21
	BUK7K32-100E	100	28		29	2.36
	BUK9K32-100E	100	31	33	26	2.36
	BUK7K45-100E	100	38		21	2.84
	BUK9K45-100E	100	42	45	21	2.84
	BUK7K89-100E	100	83		13	3.96
	BUK9K89-100E	100	85	89	13	3.96
	BUK7K134-100E	100	121		9.8	4.68
	BUK9K134-100E	100	154	159	8.5	4.68
LFPAK33 (SOT1210)	BUK9M34-100E	100	34	34	29	1.89
	BUK9M43-100E	100	43	44	26	1.88
	BUK9M120-100E	100	119	120	12	3.4
	BUK9M156-100E	100	150	156	9.3	4.17
LFPAK88 (SOT1235)	<b>BUK9S15-100E</b>	100		15		
	<b>BUK9S29-100E</b>	100		29		
SOT223	BUK98180-100A/CU	100	173	180	4.6	
	BUK9875-100A/CU	101	72	75	7	

## P-channel 30V-60V automotive power MOSFETs

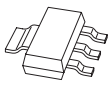
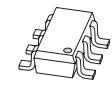




Types in **bold** represent new products

Package name	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ 10 V (m $\Omega$ )	$I_D$ [max] @ 25 °C (A)	$R_{th(j-mb)}$ [max] (K/W)
LFPAK56	<b>BUK6Y19-30P</b>	30	19	45	2.3
	<b>BUK6Y14-40P</b>	40	15	64	1.4
	<b>BUK6Y33-60P</b>	60	33	38	1.4
	<b>BUK6Y61-60P</b>	60	61	22	2.3

## Small-signal automotive MOSFETs – Low RDS(on)

Package											
Size (mm)											
P <sub>tot</sub> (mW)											
Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =				
							10 V	4.5 V	2.5 V	1.8 V	
N-channel	20	8	7	0.4	1	1	-	15	18	-	
			4.7	0.45	1	2	-	24	29	40	
			2.8	0.4	1	2	-	64	78	110	
		12	12.9	0.4	0.9	2	-	10	12	16	
			11.4	0.4	0.9	2	-	12	15	20	
			6.3	0.75	1.25	2	-	16	24	-	
	30	8	6	0.4	0.9	1	-	13	23	39	
			11.3	0.4	0.9	2	-	13	14	17	
			5	0.4	0.9	2	-	28	32	37	
		12	4	0.75	1.25	2	-	55	72	-	
			5.5/22	1	2.5	2	17	22	-	-	
			3.9/17	1	2.5	2	30	39	-	-	
	40	15	3.7/11	1	2.5	2	54	70	-	-	
			19	1.4	2.1	-	18	22	-	-	
			6.2/19	1.3	2.7	-	17	22	-	-	
		20	19	2.4	4	-	18	-	-	-	
			5/18	1.5	2.5	2	25	30	-	-	
			2.7	1	2.5	1	64	79	-	-	
	60	20	9	1	2.5	1	85	112	-	-	
			2.5/5.7	1	2.5	1	95	120	-	-	
			4.2/13	1.3	2.7	-	32	38	-	-	
		20	3.5/11	1.3	2.7	2	37	45	-	-	
			11	1.3	2.7	2	59	70	-	-	
			2.2/7.4	1.3	2.7	2	88	104	-	-	
	80	20	1.5/5.7	1.3	2.7	2	176	196	-	-	
			0.8	1.3	2.7	2	300	332	-	-	
			10	1.3	2.7	2	72	84	-	-	
		20	7	1.3	2.7	2	175	195	-	-	
1.1			1.3	2.7	2	345	390	-	-		
1.5			1.3	2.7	2	285	301	-	-		
100	20	1.1	1.3	2.7	2	527	555	-	-		
P-channel	12	12	11.8	0.47	0.9	-	-	15	17	21	
			5.6	0.45	0.95	2	-	27	38	50	
	20	8	2	0.5	1.1	-	-	100	155	210	
			2.3	0.45	0.95	-	-	120	150	200	
			10.3	0.47	0.9	2	-	19	22	28	
			5	0.47	0.9	2.3	-	28	31	36	
			5.3	0.75	1.25	2	-	28	42	-	
		12	5	0.47	0.9	2	-	39	45	56	
			5.7	0.75	1.25	2	-	41	56	-	
			3.5	0.75	1.25	-	-	48	71	-	
			3.3	0.75	1.25	2	-	67	99	-	
			2.4	1	2.5	2	-	97	147	-	
	30	20	8.8	1	2.5	-	24	32	-	-	
			4.2	1	3	2	35	47	-	-	
	40	20	1.5	1	2.5	1	180	220	-	-	
			14	1.4	2.7	-	30	45	-	-	
	60	20	8	1.9	3.2	-	95	125	-	-	

Types in **bold** represent new products

SOT223	SOT457 (SC-74)	SOT23	DFN2020MD-6 (SOT1220)	DFN2020D-6 (SOT1118D)	DFN1010D-3 (SOT1215)
					
6.5 x 3.5 x 1.65	2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0	2.0 x 2.0 x 0.65	2.0 x 2.0 x 0.65	1.1 x 1.0 x 0.37
1700	600	250	1250	1250	1000
		<b>PMV15UNEA</b>			
		PMV28UNEA			
		PMV65UNEA			
			PMPB10XNEA		
			PMPB12UNEA		
		PMV20XNEA	PMPB20XNEA		
		<b>PMV19XNEA</b>			
			PMPB13XNEA		
			PMPB29XNEA		
				PMDPB56XNEA	
	PMN25ENEA	PMV15ENEA	<b>BUK6D22-30E</b>		
		PMV28ENEA	<b>BUK6D38-30E</b>		
		PMV52ENEA	<b>BUK6D72-30E</b>		
			BUK9D23-40E		
	<b>PMN20ENA</b>		BUK6D23-40E		
			BUK7D25-40E		
	<b>PMN30ENEA</b>	<b>PMV30ENEA</b>	<b>BUK6D30-40E</b>		
		PMV60ENEA			
			BUK6D120-40E		
	<b>PMN40ENA</b>	PMV130ENEA			
	PMN55ENEA	PMV37ENEA	BUK6D43-60E		
			BUK6D56-60E		
			BUK6D77-60E		
	PMN120ENEA	PMV88ENEA	BUK6D125-60E		
	PMN230ENEA	PMV164ENEA	BUK6D210-60E		
		PMV450ENEA			
			BUK6D81-80E		
			BUK6D230-80E		
					PMXB360ENEA
PMT280ENEA	PMN280ENEA	PMV280ENEA	BUK6D335-100E		
PMT560ENEA					
			PMPB15XPA		
		PMV27UPEA			
		NX2301P			
		BSH205G2			
			PMPB20XPEA		
			PMPB29XPEA		
		PMV30XPEA			
			PMPB43XPEA		
	PMN42XPEA				
	PMN48XPA	PMV48XPA			
		PMV65XPEA			
		PMV100XPEA			
			PMPB27EPA		
		PMV50EPEA			
		PMV250EPEA			
			BUK6D43-40P		
			BUK6D120-60P		


## Small-signal automotive MOSFETs – High RDS(on)

Package											
Size (mm)											
P <sub>tot</sub> (mW)											
Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =				
							10 V	4.5 V	2.5 V	1.8 V	
N	30	8	0.4	0.6	1.1	2	-	1000	1400	2000	
			0.36	0.9	1.5	-	900	1000	-	-	
	60	20	0.36	0.48	1.6	1.5	1000	1100	1400	-	
			0.3	1	2.5	2	1000	1300	-	-	
			0.3	1	2.5	3	1100	1300	-	-	
			0.2	0.8	1.5	yes	2700	3000	4000	-	
P	30	8	0.23	0.6	1.1	2	-	2800	5300	-	
	50	20	0.2	1.1	2.1	1	-	5300	6000	-	-





## Small-signal automotive MOSFETs – Dual



Package											
Size (mm)											
P <sub>tot</sub> (mW)											
Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =				
							10 V	4.5 V	2.5 V	1.8 V	
N	30	12	4	0.75	1.25	2	-	55	72	-	
N	20	8	0.73	0.5	0.95	2	-	290	420	600	
P			0.5	0.5	1.3	2	-	670	1200	1800	

## Small-signal MOSFETs complementary

Package	Type	Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GSth</sub> min (V)	V <sub>GSth</sub> max (V)	
SOT363 (SC-88) (2.0 x 1.25 x 0.95) 	NX3008CBKS	N	30	8	0.35	0.6	1.1	
		P	30	8	0.2	0.6	1.1	





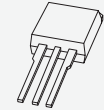

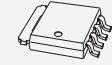
SOT23	SOT363 (SC-88)	SOT323 (SC-70)	DFN1006 (SOT883)
			
2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.0 x 0.6 x 0.5
250	300	200	250
NX3008NBK	NX3008NBKS	NX3008NBKW	
BSS138P	BSS138PS	BSS138PW	
BSS138BK	BSS138BKS	BSS138BKW	
2N7002BK	2N7002BKS	2N7002BKW	2N7002BKM
2N7002CK			
BSS138AKA			
NX3008PBK	NX3008PBKS	NX3008PBKW	
BSS84AK	BSS84AKS	BSS84AKW	BSS84AKM

SOT363 (SC-88)	DFN2020D-6 (SOT1118D)
	
2.0 x 1.25 x 0.95	2.0 x 2.0 x 0.65
300	1250
	PMDPB56XNEA
PMGD290UCEA	

$t_{on}$ typ (ns)	$t_{off}$ typ (ns)	QG typ (nC)	ESD protection (kV)	$R_{DS(on)}$ typ (m $\Omega$ ) @ $V_{GS} =$					
				10 V	4.5 V	2.5 V	1.8 V	1.5 V	1.2 V
26	88	0.52	2	-	1000	1400	2000	-	-
49	103	0.55	2	-	2800	5300	-	-	-


## N-channel 25V-30V Power MOSFETs

Types in **bold** represent new products

Package	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ $V_{GS} = 10$ V (m $\Omega$ )	$R_{DS(on)}$ [max] @ $V_{GS} = 4.5$ V or 5 V (m $\Omega$ )	$I_D$ [max] (A)	$Q_{C(total)}$ [typ] (nC)
TO-220 (SOT78) 	PSMN1R1-30PL	30	1.3	1.6	120	118
	PSMN1R8-30PL	30	1.8	2.3	100	83
	PSMN2R0-30PL	30	2.1	2.8	100	55
	PSMN2R7-30PL	30	2.7	3.6	100	32
	PSMN3R4-30PL	30	3.4	4.1	100	31
	PSMN4R3-30PL	30	4.3	6.2	100	19
	PSMN017-30PL	30	17	23	32	5.1
	PSMN022-30PL	30	22	34	30	4.4
D <sup>2</sup> PAK (SOT404) 	PSMNR90-30BL	30	1	1.4	120	118
	PSMN1R5-30BLE	30	1.5	1.85	120	108
	PSMN1R8-30BL	30	1.8	2.1	100	83
	PSMN1R6-30BL	30	1.9	2.2	100	101
	PSMN2R0-30BL	30	2.1	2.9	100	55
	PSMN2R7-30BL	30	3	3.7	100	32
	PSMN3R4-30BL	30	3.3	3.8	100	31
	PSMN3R4-30BLE	30	3.4	5	120	37
	PSMN4R3-30BL	30	4.1	5.2	100	19
	PSMN017-30BL	30	17	23	32	5.1
	PSMN022-30BL	30	22	30	30	4.4
I <sup>2</sup> PAK (SOT226) 	PSMN1R1-30EL	30	1.3	1.6	120	118
	PSMN017-30EL	30	17	23	32	5.1
LFPAK56E (SOT1023) 	PSMN0R7-25YLD	25	0.74	0.92	300	50.9
	PSMN1R2-25YL	25	1.2	1.9	100	50.6
	<b>PSMNR58-30YLH</b>	30	0.67	0.9	380	55
	PSMN0R9-30YLD	30	0.87	1.1	300	51
	PSMN1R3-30YL	30	1.3	2	100	46.6
LFPAK56 (Power-SO8) 	<b>PSMNR51-25YLH</b>	25	0.57	0.82	380	53
	<b>PSMNR60-25YLH</b>	25	0.7	1.02	300	43
	PSMN0R9-25YLD	25	0.86	1.2	300	41.5
	PSMN1R0-25YLD	25	1.02	1.4	100	33.2
	PSMN1R1-25YLC	25	1.15	1.5	100	39
	PSMN1R2-25YLD	25	1.15	1.7	100	28
	PSMN1R2-25YLC	25	1.3	1.7	100	31
	PSMN1R5-25YL	25	1.5	2.2	100	36
	PSMN1R7-25YLD	25	1.68	2.4	100	21.5
	PSMN2R0-25YLD	25	2	2.9	100	15.7
	PSMN2R9-25YLC	25	3.15	4.1	100	16
	PSMN4R0-25YLC	25	4.5	5.8	84	10.9
	PSMN5R4-25YLD	25	5.4	8.4	70	5.7
	PSMN6R0-25YLD	25	6.03	10	61	4.9
	PSMN6R0-25YLB	25	6.1	7.9	73	9

## N-channel 25V-30V Power MOSFETs

Types in **bold** represent new products

Package	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ $V_{GS} = 10\text{ V}$ (m $\Omega$ )	$R_{DS(on)}$ [max] @ $V_{GS} = 4.5\text{ V or }5\text{ V}$ (m $\Omega$ )	$I_D$ [max] (A)	$Q_{C(total)}$ [typ] (nC)
LFPAK56 (Power-SO8) 	<b>PSMNR70-30YLH</b>	30	0.82	1.1	300	46
	PSMN1R0-30YLD	30	1.02	1.3	300	38.2
	PSMN1R0-30YLC	30	1.15	1.4	100	50
	PSMN1R2-30YLD	30	1.24	1.6	100	32
	PSMN1R2-30YLC	30	1.25	1.7	100	38
	PSMN1R4-30YLD	30	1.42	1.9	100	27.6
	PSMN1R5-30YL	30	1.5	1.9	100	36.2
	PSMN1R5-30YLC	30	1.55	2.1	100	30
	PSMN1R7-30YL	30	1.7	2.1	100	36.2
	PSMN2R0-30YLD	30	2	2.5	100	21.8
	PSMN2R0-30YL	30	2	2.6	100	30
	PSMN2R0-30YLE	30	2	3.5	100	41
	PSMN2R2-30YLC	30	2.15	2.8	100	26
	PSMN2R4-30YLD	30	2.4	3.1	100	18
	PSMN2R5-30YL	30	2.4	3.2	100	27
	PSMN2R6-30YLC	30	2.8	3.7	100	18
	PSMN3R0-30YL	30	3	4	100	21
	PSMN3R0-30YLD	30	3	4	100	14.5
	PSMN3R5-30YL	30	3.5	4.6	100	19
	PSMN4R0-30YL	30	4	5.3	100	17.6
	PSMN4R0-30YLD	30	4	5.5	95	9.6
	PSMN4R1-30YLC	30	4.35	5.7	92	11
	PSMN5R0-30YL	30	5	6.7	91	14.1
	PSMN6R0-30YL	30	6	7.9	79	11
	PSMN6R0-30YLD	30	6	8.4	66	6.7
	PSMN6R1-30YLD	30	6.1	8.4	66	6.4
	PSMN6R0-30YLB	30	6.5	8.1	71	9
	PSMN7R0-30YL	30	7	9.1	76	10
	PSMN7R0-30YLC	30	7.1	8.9	61	7.9
	PSMN7R5-30YLD	30	7.5	10	51	5.8
PSMN9R1-30YL	30	9.1	14	57	8.4	
PSMN9R5-30YLC	30	9.8	12	44	5	
PSMN013-30YLC	30	13	17	32	4	
PSMN011-30YLC	30	11.6	15	37	4.9	
PSMN4R5-30YLC	30	4.8	6.1	84	9.6	
LFPAK56-UL2595 (SOT1023A) 	PSMN0R9-30ULD	30	0.87	1.09	300	109

## N-channel 25V-30V Power MOSFETs

Types in **bold** represent new products

Package	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ $V_{GS} = 10$ V (m $\Omega$ )	$R_{DS(on)}$ [max] @ $V_{GS} = 4.5$ V or 5 V (m $\Omega$ )	$I_b$ [max] (A)	$Q_{G(tot)}$ [typ] (nC)
LFPAK33 (SOT1210)	<b>PSMN1R5-25MLH</b>	25	1.81	2.7	150	17
	PSMN2R0-25MLD	25	2	3.1	70	15.9
	PSMN2R8-25MLC	25	2.8	3.8	70	16.3
	PSMN3R5-25MLD	25	3.51	5.4	70	8.7
	PSMN3R9-25MLC	25	4.15	5.6	70	9.7
	PSMN5R3-25MLD	25	5.3	8.4	70	5.9
	PSMN6R1-25MLD	25	6.13	10	60	4.9
	PSMN9R0-25MLC	25	8.65	11	55	5.4
	<b>PSMN1R6-30MLH</b>	30	1.9	2.6	160	41
	<b>PSMN1R8-30MLH</b>	30	2.1	2.9	150	17
	PSMN2R4-30MLD	30	2.4	3.2	70	16
	PSMN3R0-30MLC	30	3.15	4.1	70	16.1
	PSMN4R2-30MLD	30	4.3	5.7	70	9.2
	PSMN4R4-30MLC	30	4.65	6	70	10.6
	PSMN6R4-30MLD	30	6.4	8.3	66	6.5
	PSMN7R0-30MLC	30	7	9	67	8.2
	PSMN7R5-30MLD	30	7.6	10	57	5.8
	PSMN9R8-30MLC	30	9.8	12	50	5
	PSMN013-30MLC	30	13	17	39	3.7
PSMN020-30MLC	30	18	27	31.8	4.6	






## N-channel 40V-60V Power MOSFETs

Types in **bold red** are in development, types in **bold** represent new products

Package	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ $V_{GS} = 10$ V (m $\Omega$ )	$R_{DS(on)}$ [max] @ $V_{GS} = 4.5$ V or 5 V (m $\Omega$ )	$I_b$ [max] (A)	$Q_{G(tot)}$ [typ] (nC)
TO-220 (SOT78)	PSMN1R5-40PS	40	1.6		150	136
	PSMN1R9-40PL	40	1.7	1.9	150	230
	PSMN2R2-40PS	40	2.1		100	110
	PSMN2R1-40PL	40	2.2	2.6	150	168.9
	PSMN2R8-40PS	40	2.8		100	71
	PSMN4R5-40PS	40	4.6		100	35
	PSMN8R0-40PS	40	7.6		77	17
	PSMN2R0-60PSR	60	2		120	137
	PSMN2R0-60PS	60	2.2		120	137
	PSMN2R5-60PL	60	2.6	3.1	150	223
	PSMN2R6-60PS	60	2.6		150	140
	PSMN3R0-60PS	60	3		100	130
	PSMN3R3-60PL	60	3.4	3.8	130	175
	PSMN4R2-60PL	60	3.9	4.3	130	151
	PSMN3R9-60PS	60	3.9		130	103
	PSMN4R6-60PS	60	4.6		100	70.8
	PSMN7R6-60PS	60	7.8		92	38.7
PSMN015-60PS	60	15		50	20.9	
LFPAK88 (SOT1235)	<b>PSMNR55-40SSH</b>	40	0.55			
	<b>PSMNR70-40SSH</b>	40	0.7		425	144
	<b>PSMNR90-40SSH</b>	40	0.9		375	118
	<b>PSMN1R0-40SSH</b>	40	1		325	98
	<b>PSMNR90-50SLH</b>	50	0.92			228
	<b>PSMN1R1-50SLH</b>	50	0.97			184
	<b>PSMN1R2-55SLH</b>	55	0.97			226
<b>PSMN1R5-55SLH</b>	55	1.50			182	
D <sup>2</sup> PAK (SOT404)	PSMN1R1-40BS	40	1.3		120	136
	PSMN2R2-40BS	40	2.2		100	130
	PSMN2R8-40BS	40	2.9		100	71
	PSMN4R5-40BS	40	4.5		100	35
	PSMN8R0-40BS	40	7.6		77	21
	PSMN1R7-60BS	60	2		120	137
	PSMN3R0-60BS	60	3.2		100	130
	PSMN4R6-60BS	60	4.4		100	70.8
	PSMN7R6-60BS	60	7.8		92	38.7
PSMN015-60BS	60	15		50	20.9	

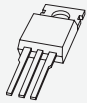
## N-channel 40V-60V Power MOSFETs

Types in **bold red** are in development, types in **bold** represent new products


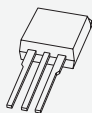
Package	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ $V_{GS} = 10\text{ V}$ (m $\Omega$ )	$R_{DS(on)}$ [max] @ $V_{GS} = 4.5\text{ V}$ or $5\text{ V}$ (m $\Omega$ )	$I_D$ [max] (A)	$Q_{G(tot)}$ [typ] (nC)	
I <sup>2</sup> PAK (SOT226)	 PSMN2R0-60ES	60	2.2		120	137	
LFPAK56E (SOT1023)		PSMNR90-40YLH	40	0.94	1.2	300	54
		PSMN1R0-40YSH	40	1		290	87
		PSMN1R0-40YLD	40	1.1	1.4	280	127
		PSMN1R5-50YLH	50	1.6			51
LFPAK56 (Power-SO8)		PSMN2R0-55YLH	55	2.24			50
		PSMN1R4-40YLD	40	1.4	1.9	240	96
		PSMN1R5-40YSD	40	1.5		240	71
		PSMN1R7-40YLD	40	1.8	2.3	200	35
		PSMN1R8-40YLC	40	1.8	2.1	100	96
		PSMN1R9-40YSD	40	1.9		200	57
		PSMN2R0-40YLD	40	2	2.7	180	30
		PSMN2R2-40YSD	40	2.2		180	45
		PSMN2R5-40YLD	40	2.6	2.6	160	25
		PSMN2R6-40YS	40	2.8		100	63
		PSMN2R8-40YSD	40	2.8		160	44
		PSMN3R2-40YLD	40	3.3	4.2	120	18
		PSMN3R3-40YS	40	3.3		100	49
		PSMN3R5-40YSD	40	3.5		120	31
		PSMN4R0-40YS	40	4.2		100	38
		PSMN5R8-40YS	40	5.7		90	28.8
		PSMN8R3-40YS	40	8.6		70	20
		PSMN014-40YS	40	14		46	12
		PSMN2R2-50YLH	50	2.2			40
		PSMN2R8-55YLH	55	2.87			39
		PSMN4R0-60YS	60	4		100	56
		PSMN4R1-60YL	60	4.1	4.8	100	103
		PSMN5R2-60YL	60	5.2	6	100	78.4
		PSMN5R5-60YS	60	5.2		100	56
PSMN5R6-60YL	60	5.6	7.2	100	66.8		
PSMN7R0-60YS	60	6.4		89	45		
PSMN7R5-60YL	60	7.5	8.7	86	60.6		
PSMN8R5-60YS	60	8		76	39		
PSMN012-60YS	60	11		59	28.4		
PSMN013-60YL	60	13	15	53	33.2		
PSMN030-60YS	60	15		29	13		
PSMN017-60YS	60	16		44	20		
LFPAK56-UL2595 (SOT1023A)	 PSMN1R0-40ULD	40	1.1	1.4	280	59	
LFPAK33 (SOT1210)		PSMN3R3-40MLD	40	3.3			
		PSMN3R3-40MSD	40	3.3			
		PSMN3R7-40MLD	40	3.7			
		PSMN3R8-40MSD	40	3.8			
		PSMN4R5-40MLD	40	4.5			
		PSMN4R7-40MSD	40	4.7			
		PSMN5R1-40MLD	40	5.1			
		PSMN5R4-40MSD	40	5.4			
		PSMN6R7-40MSD	40	6.7			
		PSMN8R5-40MLD	40	8.5			
		PSMN8R5-40MSD	40	8.5			
		PSMN5R6-50MLH	50	5.6			33
		PSMN6R9-50MLH	50	6.93			27
		PSMN7R3-55MLH	55	7.38			33
PSMN9R0-55MLH	55	9.12			27		
PSMN011-60ML	60	11	13	61	37.2		
PSMN011-60MS	60	11		61	23		

## N-channel 75V-200V Power MOSFETs

Package	Type number	$V_{DS} [max] (V)$	$R_{DS(on)} [max] @ V_{GS} = 10 V (m\Omega)$	$R_{DS(on)} [max] @ V_{GS} = 4.5 V \text{ or } 5 V (m\Omega)$	$I_D [max] (A)$	$Q_{G(tot)} [typ] (nC)$
TO-220 (SOT78)	PSMN3R3-80PS	80	3.3		120	139
	PSMN3R5-80PS	80	3.5		120	139
	PSMN4R4-80PS	80	4.1		100	112
	PSMN4R3-80PS	80	4.3		120	111
	PSMN5R0-80PS	80	4.7		100	87
	PSMN6R5-80PS	80	6.9		100	71
	PSMN8R7-80PS	80	8.7		90	52
	PSMN012-80PS	80	11		74	36
	PSMN017-80PS	80	17		50	26
	PSMN4R3-100PS	100	4.3		120	170
	PSMN4R8-100PSE	100	4.8		120	196
	PSMN5R0-100PS	100	5		120	170
	PSMN5R6-100PS	100	5.6		100	141
	PSMN7R0-100PS	100	6.8		100	125
	PSMN7R8-100PSE	100	7.8		100	128
	PSMN8R5-100PS	100	8.5		100	111
	PSMN9R5-100PS	100	9.6		98	45
	PSMN013-100PS	100	13		68	59
	PSMN016-100PS	100	16		57	49
	PSMN027-100PS	100	27		53	21
	PSMN034-100PS	100	35		32	23.8
	PSMN015-110P	110	15		75	90
	PHP27NQ11T	110	50		27.6	30
	PHP23NQ11T	110	70		23	22
	PHP18NQ11T	110	90		18	21
	PSMN6R3-120PS	120	6.7		70	207.1
	PSMN7R8-120PS	120	7.9		70	167
	PSMN030-150P	150	30		55.5	98
	PHP28NQ15T	150	65		28.5	24
	PSMN057-200P	200	57		39	96
	PHP33NQ20T	200	77		32.7	32.2
PHP20NQ20T	200	130		20	65	








## N-channel 75V-200V Power MOSFETs

Package	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ $V_{GS} = 10$ V (m $\Omega$ )	$R_{DS(on)}$ [max] @ $V_{GS} = 4.5$ V or 5 V (m $\Omega$ )	$I_D$ [max] (A)	$Q_{G(total)}$ [typ] (nC)
D <sup>2</sup> PAK (SOT404) 	PSMN2R8-80BS	80	3		120	139
	PSMN3R3-80BS	80	3.5		120	111
	PSMN4R4-80BS	80	4.5		100	125
	PSMN5R0-80BS	80	5.1		100	101
	PSMN6R5-80BS	80	6.9		100	71
	PSMN8R7-80BS	80	8.7		90	52
	PSMN012-80BS	80	11		74	36
	PSMN017-80BS	80	17		50	26
	PSMN3R8-100BS	100	3.9		120	170
	PSMN3R7-100BSE	100	3.95		120	176
	PSMN4R8-100BSE	100	4.8		120	196
	PSMN5R6-100BS	100	5.6		100	141
	PSMN7R0-100BS	100	6.8		100	125
	PSMN7R6-100BSE	100	7.6		75	128
	PSMN9R5-100BS	100	9.6		89	82
	PSMN013-100BS	100	14		68	59
	PSMN016-100BS	100	16		57	49
	PSMN027-100BS	100	27		37	30
	PSMN034-100BS	100	35		32	23.8
	PHB45NQ15T	150	42		45.1	32
PSMN057-200B	200	57		39	96	
PHB33NQ20T	200	77		32.7	32.2	
I <sup>2</sup> PAK (SOT226) 	PSMN5R0-100ES	100	5		120	170
	PSMN7R0-100ES	100	6.8		100	125
	PSMN8R5-100ES	100	8.5		100	111
	PSMN7R8-120ES	120	7.9		70	167

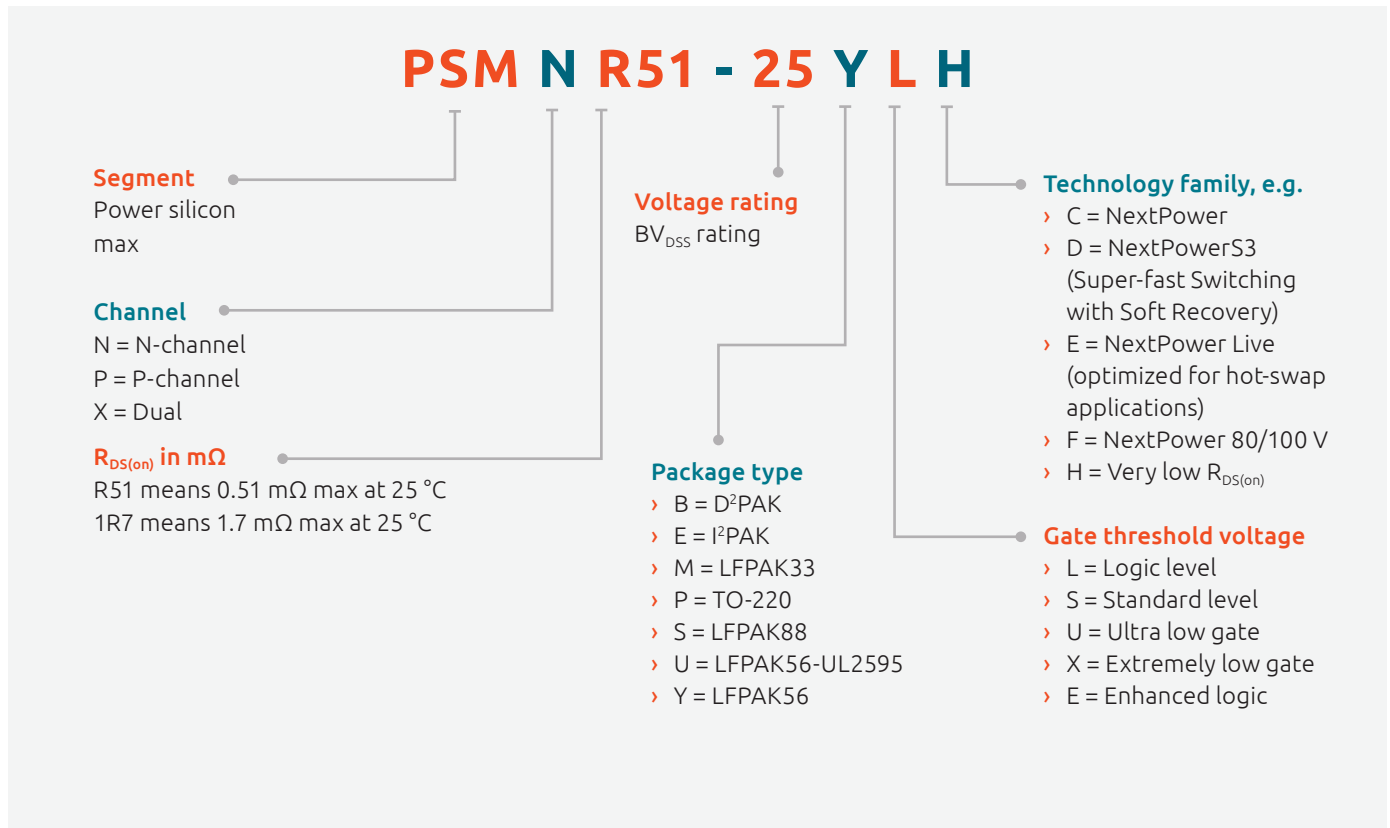
## N-channel 75V-200V Power MOSFETs

Types in **bold red** are in development, types in **bold** represent new products

Package	Type number	$V_{DS}$ [max] (V)	$R_{DS(on)}$ [max] @ $V_{GS} = 10\text{ V}$ (m $\Omega$ )	$R_{DS(on)}$ [max] @ $V_{GS} = 4.5\text{ V or }5\text{ V}$ (m $\Omega$ )	$I_D$ [max] (A)	$Q_{G(tot)}$ [typ] (nC)	
LFPAK56E (SOT1023)		<b>PSMN3R9-100YSF</b>	100	4			
		PSMN8R0-80YL	80	8	8.5	100	104
LFPAK56 (Power-SO8)		PSMN8R2-80YS	80	8.5		82	55
		PSMN010-80YL	80	10	11	84	84.7
		PSMN011-80YS	80	11		67	45
		PSMN013-80YS	80	12.9		60	37
		PSMN014-80YL	80	14	15	62	56.9
		PSMN018-80YS	80	18		45	26
		PSMN025-80YL	80	25	27	37	34.3
		PSMN026-80YS	80	28		34	20
		PSMN041-80YL	80	41	45	25	21.9
		PSMN045-80YS	80	45		24	12.5
		PSMN5R6-100YSF	100	5.6		158	63
		PSMN6R9-100YSF	100	6.9		128	51
		PSMN8R7-100YSF	100	8.7		100	39
		<b>PSMN011-100YSF</b>	100	10.9		79.5	34.3
		PSMN012-100YL	100	12	12	85	118
		PSMN012-100YS	100	12		60	64
		PSMN013-100YSE	100	13		82	75
		PSMN015-100YL	100	15	15	69	86.3
		PSMN016-100YS	100	16		51	54
		PSMN019-100YL	100	19	19	56	72.4
		PSMN021-100YL	100	21	22	49	65.6
		PSMN020-100YS	100	21		43	41
		PSMN028-100YS	100	28		42	33
		PSMN038-100YL	100	38	38	30	39.2
		PSMN039-100YS	100	39		28.1	23
		PSMN069-100YS	100	72		17	14
		PSMN059-150Y	150	59		43	27.9
		PSMN102-200Y	200	102		21.5	30.7
LFPAK33 (SOT1210)		PSMN040-100MSE	100	37		30	30
		PSMN075-100MSE	100	71		18	16.4
SOT873		PML260SN	200	294		8.8	13.3
		PML340SN	220	386		7.3	13.2
LFPAK88 (SOT1235)		<b>PSMN2R0-100SSF</b>	100	2.0			
		<b>PSMN2R0-100SSE</b>	100	2.0			
		<b>PSMN2R5-100SSF</b>	100	2.5			
		<b>PSMN2R5-100SSE</b>	100	2.5			





## Power MOSFETs nomenclature




## Small-signal MOSFETs

### Small-signal MOSFETs in DFN1006 and DFN1006B packages



Package											DFN1006-3 (SOT883)	DFN1006B-3 (SOT883B)					
																	
Size (mm)											1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37					
P <sub>tot</sub> (mW)											250	250					
Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>G</sub> typ (nC)	ESD protec- tion (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =							
										10 V	4.5 V	2.5 V	1.8 V	1.5 V	1.2 V		
N-channel	20	8	1.9	0.45	0.95	5.3	16	1.6	2	-	120	160	210	270	-	PMZ130UNE	
			1.6	0.45	0.95	5.3	16	1.6	2	-	170	200	240	300	-		PMZB150UNE
			1	0.5	0.95	6	86	0.45	2	-	270	360	470	600	-	PMZ290UNE2	PMZB290UNE2
			0.6	0.45	0.95	5.6	19	0.4	1	-	470	620	845	1125	2210	PMZ600UNE	PMZB600UNE
	30	8	1.5	0.45	0.95	5	17	1.6	2	-	210	240	270	300	-	PMZ200UNE	PMZB200UNE
			1	0.45	0.95	4	12	0.8	2	-	390	460	30	610	-	PMZ390UNE	PMZB390UNE
			0.59	0.45	0.95	4	12	0.6	2	-	550	660	770	890	-	PMZ550UNE	PMZB550UNE
	60	20	0.45	1.1	2.1	5	12	0.5	2	1000	1300	-	-	-	-	2N700BKM	2N7002BKMB
			0.35	1.1	2.1	4.7	6.9	1	2	2200	2500	-	-	-	-	NX7002BKM	NX7002BKMB
P-channel	20	8	1.4	0.45	0.95	4	26	1.3	1.8	-	330	420	520	-	-	PMZ350UPE	PMZB350UPE
			0.5	0.45	0.95	2.3	13.5	1.19	1	-	1020	1270	1700	2300	3500	PMZ950UPE	PMZB950UPE
	30	8	1	0.45	0.95	2.9	22	1.45	2	-	430	470	750	950	-	PMZ320UPE	PMZB320UPE
			0.41	0.45	0.95	3	14	0.7	2	-	1200	1700	2100	3000	-	PMZ1200UPE	PMZB1200UPE
	50	20	0.23	1.1	2.1	13	48	0.26	1	4500	5700	-	-	-	-	BSS84AKM	BSS84AKMB

### Small-signal MOSFETs in DFN0606




Types in **bold** represent new products

Package											DFN0606-3 (SOT8001)						
																	
Size (mm)											0.6 x 0.6 x 0.37						
P <sub>tot</sub> (mW)											250						
Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>G</sub> typ (nC)	ESD protec- tion (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =							
										10 V	4.5 V	2.5 V	1.8 V	1.5 V	1.2 V		
N-channel	20	8		0.45	0.95	5.6	19	0.4	1	-	470	620	845	1125	2210	<b>PMH600UNE</b>	
	30	8		0.45	0.95	4	12	0.6	2	-	550	660	770	890	-	<b>PMH550UNE</b>	
	60	20		1.1	2.1	4.7	6.9	1	2	2200	2500	-	-	-	-	<b>NX7002BKH</b>	
P-channel	20	8		0.45	0.95	2.3	13.5	1.19	1	-	1020	1270	1700	2300	3500	<b>PMH950UPE</b>	
	30	10		0.45	0.95	3	14	0.7	2	-	1200	1700	2100	3000	-	<b>PMH1200UPE</b>	

## Small-signal MOSFETs in DFN1010D-3 single and DFN1010B-3 dual packages



Package													DFN1010D-3 (SOT1215)	DFN1010B-6 (SOT1216)				
																		
Size (mm)													1.1 x 1.0 x 0.37	1.1 x 1.0 x 0.37				
P <sub>tot</sub> (mW)													1000	350				
Configuration	Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>c</sub> typ (nC)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =							
											10 V	4.5 V	2.5 V	1.8 V	1.5 V	1.2 V		
Single	N-channel	12	8	3.2	0.4	0.9	6	18	6.6	1	-	34	39	46	50	121	PMXB40UNE	
		20	8	3.2	0.5	0.9	6	17	5.7	1	-	42	48	56	64	-	PMXB43UNE	
		30	20	3.2	1	2	3	11	3.6	-	49	56	-	-	-	-	PMXB56EN	
				3.2	1	2.5	3	11	6	1	44	56	-	-	-	-	PMXB65ENE	
	80	20	1.1	1.3	2.7	2	9	3	2	345	390	-	-	-	-	PMXB360ENEA		
	P-channel	12	8	3.2	0.4	1	6.2	27	6.7	1.5	-	59	78	120	198	880	PMXB65UPE	
		20	8	2.9	0.4	1	6	29	6.8	1	-	69	86	130	205	950	PMXB75UPE	
				1.2	0.45	0.95	3	18	1.25	1.5	-	350	450	600	760	1200	PMXB350UPE	
30		20	2.4	1	2.5	4	16	6.2	1	100	125	-	-	-	-	PMXB120EPE		
Dual	N-ch	20	8	0.6	0.45	0.95	5.6	19	0.4	1	-	470	620	845	1125	2210		PMDXB600UNE
		30	8	0.59	0.45	0.95	4	12	0.6	2	-	550	660	770	890	-		PMDXB550UNE
		60	20	0.26	1.1	2.1	4.7	6.9	1	2	2200	2500	-	-	-	-		NX7002BKXB
	P-ch	20	8	0.5	0.45	0.95	2.3	13.5	1.19	1	-	1020	1270	1700	2300	3500		PMDXB950UPE
		30	8	0.41	0.45	0.95	3	14	0.7	2	-	1200	1700	2100	3000	-		PMDXB1200UPE
				0.59	0.45	0.95	4	12	0.6	2	-	550	660	770	890	-		
Complementary	N	20	8	0.6	0.45	0.95	5.6	19	0.4	1	-	470	620	845	1125	2210		
	P	20	8	0.5	0.45	0.95	2.3	13.5	1.19	1	-	1020	1270	1700	2300	3500		PM CXB900UE
	N	30	8	0.59	0.45	0.95	4	12	0.6	2	-	550	660	770	890	-		
	P	30	8	0.41	0.45	0.95	3	14	0.7	2	-	1200	1700	2100	3000	-		PM CXB1000UE

## Small-signal low-leakage MOSFETs

Package													DFN1006-3 (SOT883)	DFN1006B-3 (SOT883B)	DFN1010B-6 (SOT1216)		
																	
Size (mm)													1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37	1.1 x 1.0 x 0.37		
P <sub>tot</sub> (mW)													250	250	350		
ConFig.	Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	I <sub>DSS</sub> max (nA)	I <sub>GSS</sub> max (nA)	ESD Protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =							
										4.5 V	2.5 V	1.8 V	1.5 V	1.2 V			
Single	N	20	8	0.6	0.45	0.95	25	50	1	470	620	845	1125	2210	PMZ600UNEL	PMZB600UNEL	
	P	20	8	0.5	0.45	0.95	25	50	1	1020	1270	1700	2300	3500	PMZ950UPEL	PMZB950UPEL	
Dual	N	20	8	0.6	0.45	0.95	25	50	1	470	620	845	1125	2210			PMDXB600UNEL
	P	20	8	0.5	0.45	0.95	25	50	1	1020	1270	1700	2300	3500			PMDXB950UPEL
Compl.	N	20	8	0.6	0.45	0.95	25	50	1	470	620	845	1125	2210			
	P	20	8	0.5	0.45	0.95	25	50	1	1020	1270	1700	2300	3500			PM CXB900UEL




# Small-signal MOSFETs in DFN2020MD-6 single and DFN2020-6 dual packages

Types in **bold** represent new products

Package														DFN2020MD-6 (SOT1220)	DFN2020-6 (SOT1118)		
																	
Size (mm)														2.0 x 2.0 x 0.65	2.0 x 2.0 x 0.65		
P <sub>tot</sub> (mW)														1250	1250		
Configuration	Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>G</sub> typ (nC)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =						
											10 V	4.5 V	2.5 V	1.8 V			
Single	N-channel	20	8	10.1	0.4	0.9	5	31	20			9	10	16	<b>PMPB8XN</b>		
				11.4	0.4	0.9	10	32	10.9	1	-	16	20	20	PMPB12UNE		
			12	12.9	0.4	0.9	13	54	23	2.2	-	10	12	16	PMPB10XNE		
				5.9	0.75	1.25	16	49	31	2	-	14	20	-	PMPB20XNEA		
				10.4	0.4	0.9	9	31	13.4	-	-	18	21	23	PMPB15XN		
				10.1	0.4	0.9	9	31	11.6	2	-	19	23	31	PMPB23XNE		
		12	11.3	0.4	0.9	12	54	24	1	-	13	14	17	PMPB13XNE			
			5	0.4	0.9	8	33	12.4	1	-	28	32	37	PMPB29XNE			
			5.5	0.45	1.2	6	21	5.1	-	-	37	55	-	PMPB33XN			
		30	20	14	1	2	9	17	13.7			10	13			<b>PMPB10EN</b>	
				13	1	2	9	17	13.7	-	12	14	-	-	PMPB11EN		
				10.4	1	2	9	9	7.2	-	16.5	20.5	-	-	PMPB20EN		
			20	10	1	2.5	6	28	13	2	17	28	-	-	PMPB25ENE		
				6.9	1	2.5	4	17	6	2	30	39	-	-	PMPB50ENE		
				5.1	1	2.5	3	15	3.5	2	54	70	-	-	PMPB100ENE		
		60	20	4	1.3	2.7	4.5	13.5	7.5	2	42	48	-	-	PMPB55ENEA		
				3	1.3	2.7	4	10.5	6.2	2	72	85	-	-	PMPB85ENEA		
		80	20	2.8	1.3	2.7	5	15	9.9	2	80	92	-	-	PMPB95ENEA		
	1.9			1.3	2.7	3.5	9.5	4.8	2	175	195	-	-	PMPB215ENEA			
	P-channel	12	8	13	0.4	0.9	7	69	26			13	17	24	<b>PMPB13UP</b>		
				12.7	0.45	0.9	6	64	22	-	-	14	19	24	PMPB14XP		
			12	11.8	0.47	0.9	18	85	67			15	17		PMPB15XP		
				20	12	10.3	0.47	0.9	16	43	28.8	-	-	19	21	27	PMPB19XP
		10.3	0.47			0.9	13	92	30	2.4	-	19	22	28	PMPB20XPE		
		5	0.47			0.9	12	91	30	2.3	-	28	31	36	PMPB29XPE		
		20	8.5		0.75	1.25	10	43	12.5	2	-	29	45	-	PMPB30XPE		
			7.9		0.47	0.9	12	62	15	-	-	30	35	45	PMPB33XP		
			5		0.47	0.9	9	57	15.6	1	-	39	45	56	PMPB43XPE		
30		12	5	0.47	0.9	15	28	14	-	-	47	54	74	PMPB47XP			
			9.5	1	2.5	3	28	19	-	24	32	-	-	PMPB24EP			
		20	8.8	1	2.5	10	28	30		24	32			PMPB27EP			
			6.8	1	2.5	7.4	27	17	-	40	55	-	-	PMPB48EP			
25		10.6	1	2.5	3	60	29		16	22			<b>PMPB16EP</b>				
Dual		N-ch	20	12	5.3	0.4	0.9	4	40	14.4	-	-	32	40	60		PMDPB30XN
					3.1	0.75	1.25	9	19	2.9	2	-	55	72	-	PMDPB56XNEA	
			30	12	3.1	0.5	1.5	6	18	1.65	1.8	-	95	130	-	PMDPB95XNE2	
		P-channel	20		8	4.5	0.45	0.95	7	41	6.3	2	-	58	74	97	PMDPB58UPE
	3.7			0.45		0.95	6	47	5.4	2	-	82	107	142	PMDPB85UPE		
	4.5			0.47	0.9	4	135	16.5	-	-	55	75	110	PMDPB55XP			
	12		4.2	0.75	1.25	7	33	5	2	-	66	98		PMDPB70XPE			
			3.7	0.4	1	6	120	5.7	-	-	80	95	120	PMDPB80XP			
			30	12	3.8	0.45	1	3	112	5.2	-	70	89	-	PMDPB70XP		
	MOSFET-Schottky	P-channel	20	12	3.7	0.4	1	6	120	5.7	-	80	95	120		PMFPB8032XP	
Pre-biased NPN	P	30	12	3.4	0.45	1	3	112	5.2	-	85	105	-		PMC85XP		
Complementary	N	20	12	5.3	0.4	0.9	4	40	14.4	-	-	26	33	50		PMCPB5530X	
	P	20	12	4.5	0.4	0.9	4	40	8.1	-	-	55	75	110			

## Small-signal MOSFETs in WLCSP4 and WLCSP6 packages






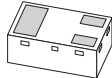
Types in **bold** represent new products

Package															WLCSP4	WLCSP6	WLCSP9
																	
Size (mm)															0.78 × 0.78 × 0.35	1.48 × 0.98 × 0.35	1.48 × 1.48 × 0.35
P <sub>tot</sub> (mW)															1300	1300	1400
Configuration	Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>G</sub> typ (nC)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =						
											4.5 V	2.5 V	1.8 V	1.5 V			
WLCSP9	N	12	8	6	0.4	0.9	6.3	30	6	2	36	46	60	86	PMCM4401VNE		
		20	8	5.4	0.4	0.9	4	27	6	2	43	55	65	75	PMCM4401UNE		
	P	12	8	4.9	0.4	0.9	4.8	25.1	6.8	2	55	77	110	-	PMCM4401VPE		
		20	8	4	0.4	0.9	4	31	5.9	2	75	95	130	-	PMCM4401UPE		
	4.2			0.4	0.9	4	26	6	2	65	88	120	-	PMCM4402UPE			
	N	12	8	9.6	0.4	0.9	10.8	97.5	16.1	2	15	18	22	30		PMCM6501VNE	
		20	8	8.7	0.4	0.9	7	100	19	2	17	20	22	30		PMCM6501UNE	
	P	12	8	8.2	0.4	0.9	8	72	19.6	2	19	25	37	-		PMCM6501VPE	
Single	N	60	20	6.1	0.9	1.5	2	70	30	2	28	31	-			<b>PMCM950ENE</b>	

Small-signal MOSFETs single (N-channel)

Package												
Size (mm)												
P <sub>tot</sub> (mW)												
V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>G</sub> typ (nC)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =			
									10 V	4.5 V	2.5 V	1.8 V
20	8	7	0.4	1	10	32	11	0.5	-	15	18	-
		4.7	0.45	1	8.2	39.5	6.2	2	-	24	29	40
		1.9	0.4	1	8	31	2.2	2	-	63	77	114
		2.2	0.4	1	6	21	2.6	2	-	64	78	110
		1.9	0.45	0.95	5.3	16	1.6	2	-	120	155	195
		1.6	0.45	0.95	5.3	16	1.6	2	-	155	190	235
		1	0.5	0.95	6	86	0.45	2	-	270	360	470
	12	0.6	0.45	0.95	5.6	19	0.4	1	-	470	620	845
		6.3	0.75	1.25	16	44	9.9	2	-	16	24	-
		8.6	0.47	0.9	7	135	7.7	-	-	15	18	22
		9.1	0.4	0.9	9	31	12	1	-	15	19	22
		5.4	0.4	0.9	7	35	6.2	-	-	24	30	40
		6	0.4	0.9	5.5	22	5.1	1	-	28	38	42
		1.5	0.45	0.95	5	17	1.6	2	-	210	240	270
30	8	1	0.45	0.95	4	12	0.8	2	-	390	460	530
		0.59	0.45	0.95	4	12	0.6	2	-	550	660	770
		0.4	0.6	1.1	26	88	0.52	2	-	1000	1400	2000
		7.2	0.4	0.9	8	33	12.4	2	-	19	22	17
	12	5.7	0.4	0.9	9	34	7	-	-	33	42	54
		4.4	0.4	0.9	9	34	7	-	-	36	43	56
		0.9	0.5	1.5	8	11	0.74	2	-	234	324	-
		7.6	1	2	9	9	7.2	-	17	21	-	-
	20	5.5	1	2.5	8	33	12.6	2	17	22	-	-
		3.9	1	2.5	6.3	14.1	6	2	28	36	-	-
		3.1	1	2.5	18	78	6.5	-	28	37	-	-
		4.5	1	2.5	3	11	6	1	30	44	-	-
		5.1	1	2	3	11	3.6	-	35	43	-	-
		2.1	1	2.5	3	15	2.6	2	70	90	-	-
40	20	0.18	0.8	1.5	10	51	0.34	-	2700	3000	4000	-
		6.2	1.3	2.7	2	12	11	-	19	23	-	-
		5.4	1	2.5	4	20	7.8	2	23	30	-	-
		2.7	1	2.5	6	12	4.1	1	64	79	-	-
		2.5	1	2.5	14	14	2.4	1	95	120	-	-
55	10	0.3	0.4	1.3	4	11	1	3	-	2300	2400	3100
60	20	4.2	1.3	2.7	3	11	10	-	32	38	-	-
		3.1	1.3	2.7	9	33	12.7	2	46	52	-	-
		2.1	1.3	2.7	6.4	15.9	5.9	2	96	108	-	-
		1.5	1.3	2.7	6.3	13	3.9	2	176	196	-	-
		0.8	1.3	2.7	5.3	10.2	2.4	2	300	332	-	-
		0.19	0.8	1.5	6	11	0.33	yes	2800	3500	4500	-
		0.27	0.5	1.5	7.9	12.5	0.49	2	2100	2200	2600	-
		0.1	0.6	1.4	2	5	-	2	2800	3800	-	-
		0.19	1.1	2.1	12	34	0.33	yes	3000	3700	-	-
100	20	0.27	1.1	2.1	4.7	6.9	1	2	2200	2500	-	-
		1.5	1.3	2.7	4.8	9.3	4.5	1	285	300	-	-
		1.1	1.3	2.7	5.7	10.2	2.9	1	527	555	-	-

Types in **bold** represent new products

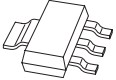






SOT223	SOT457 (SC-74)	SOT23	SOT323 (SC-70)	DFN1006 (SOT883)	DFN1006B (SOT883B)
					
6.5 x 3.5 x 1.65	2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37
1700	600	250	200	250	250
		<b>PMV15UNEA</b>			
	PMN28UNE	PMV28UNEA			
		PMV65UNE	PMF63UNE		
				PMZ130UNE	
					PMZB150UNE
				PMZ290UNE2	PMZB290UNE2
				PMZ600UNE	PMZB600UNE
		PMV20XNEA			
		PMV16XN			
	PMN16XNE				
		PMV30UN2			
	PMN30UNE				
				PMZ200UNE	PMZB200UNE
				PMZ390UNE	PMZB390UNE
				PMZ550UNE	PMZB550UNE
		NX3008NBK	NX3008NBKW		
		PMV20XNE			
	PMN30UN				
		PMV40UN2			
			PMF250XNE		
		PMV20EN			
	PMN25ENE	PMV15ENEA			
		PMV28ENEA			
		PMV37EN2			
	PMN40ENE	PMV42ENE			
		PMV45EN2			
		PMV90ENE			
		NX3020NAK	NX3020NAKW		
	PMN20ENA				
	PMN30ENEA	PMV30ENEA			
		PMV60ENEA			
		PMV130ENEA			
		B5H111BK			
	PMN40ENA				
	PMN55ENE	PMV55ENEA			
	PMV30ENEA	PMV88ENEA			
	PMN230ENE	PMV164ENEA			
		PMV450ENEA			
		NX138AK			
		NX138BK	NX138BKW		
		BSN20BK			
		NX7002AK	NX7002AKW		
		NX7002BK	NX7002BKW	NX7002BKM	NX7002BKMB
PMT280ENEA	PMN280ENEA	PMV280ENEA			
PMT560ENEA					

Small-signal MOSFETs single (P-channel)

Package													
Size (mm)													
P <sub>tot</sub> (mW)													
V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th)</sub> min (V)	V <sub>GS(th)</sub> max (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>C</sub> typ (nC)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =				
									10 V	4.5 V	2.5 V	1.8 V	
20	8	5.6	0.45	0.95	11	83	14.7	2	-	27	38	50	
		5.3	0.45	0.95	41	122	14.7	2	-	30	38	51	
		5.4	0.45	0.95	34	128	15.5	-	-	34	42	57	
		4	0.47	0.9	400	2180	10.5	3	-	50	57	70	
		2	0.5	1.1	7	50	6	-	-	100	155	210	
		1.2	0.45	0.95	33	52	3.3	-	-	170	210	280	
		2.3	0.45	0.95	5	43	3.7	-	-	120	150	200	
		1.4	0.45	0.95	9	35	1.3	1.8	-	330	420	520	
	0.5	0.45	0.95	2.3	13.5	1.19	1	-	1020	1270	1700		
	4.5	0.75	1.25	7.9	59	11	2	-	28	42	-		
	6.8	0.47	0.9	12	62	15	-	-	30	35	48		
	5.7	0.75	1.25	44	60	11.5	2	-	41	56	-		
	4.1 / 3.5	0.75	1.25	24	84	8.5	-	-	48	71	-		
	4.4	0.47	0.9	7	135	7.7	-	-	48	60	82		
	4.7	0.47	0.9	5.1	141	8.5	-	-	50	64	88		
	3.9	0.55	0.95	28	101	7.6	-	-	65	90	-		
	3.3	0.75	1.25	7	36	5	2	-	67	99	-		
	4.1	0.75	1.25	20	57	5.2	2	-	70	101	-		
	3.9	0.47	0.9	6	120	5	-	-	72	88	110		
	3.2	0.47	0.9	6	120	5	-	-	77	95	120		
2	0.65	1.15	48	64	4.8	-	-	90	125	-			
2.3	0.7	1.3	5.3	36	3.4	2	-	100	155	-			
1	0.65	1.15	26	44	2.6	-	-	175	240	-			
30	8	1	0.45	0.95	2.9	22	1.45	2	-	400	480	600	
		0.41	0.45	0.95	3	14	0.7	2	-	1200	1700	2100	
		0.23	0.6	1.1	49	103	0.55	2	-	2800	5300	-	
	20	5.3	1	3	6	36	12.8	2	35	49	-	-	
4.4	1	3	5	19	6.5	2	60	96	-	-	-		
40	20	1.8	1	2.5	10	40	4.7	1	180	220	-	-	
50	20	0.2	1.1	2.1	24	73	0.26	1	5300	6000	-	-	
70	20	2.4	1	3	6	42	10.6	2	130	150	-	-	






Types in **bold** represent new products




SOT223	SOT457 (SC-74)	SOT23	SOT363 (SC-88)	SOT323 (SC-70)	DFN 1006-3 (SOT883)	DFN1006B-3 (SOT883B)
						
6.5 x 3.5 x 1.65	2.9 x 1.5 x 1.0	2.9 x 1.3 x 1.0	2.0 x 1.25 x 0.95	2.0 x 1.25 x 0.95	1.0 x 0.6 x 0.48	1.0 x 0.6 x 0.37
1700	600	250	300	200	250	250
		PMV27UPE				
		PMV33UPE				
		PMV32UP				
		PMV50UPE				
		NX2301P				
		PMV160UP				
		BSH205G2				
					PMZ350UPE	PMZB350UPE
					PMZ950UPE	PMZB950UPE
	PMN30XPE	PMV30XPEA				
	PMN30XP					
	PMN48XP	PMV48XP				
		PMV50XP				
	PMN52XP					
		PMV65XP				
		PMV65XPE				
	PMN70XPE					
	PMN70XP					
		PMV75UP				
			PMG85XP			
		PMV100XPEA				
				PMF170XP		
					PMZ320UPE	PMZB320UPE
					PMZ1200UPE	PMZB1200UPE
		NX3008PBK		NX3008PBKW		
	PMN50EPE	PMV35EPE				
	PMN70EPE	<b>PMV74EPE</b>				
		PMV250EPEA				
		BSS84AK		BSS84AKW	BSS84AKM	BSS84AKMB
PMT200EPE						

## Small-signal MOSFETs dual

Package										
Size (mm)										
P <sub>tot</sub> (mW)										
Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th) min</sub> (V)	V <sub>GS(th) max</sub> (V)	t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>c</sub> typ (nC)	ESD protection (kV)	
N-channel	20	8	0.6	0.45	0.95	5.6	19	0.4	1	
		12	5.3	0.4	0.9	4	40	14.4	-	
	30	8	0.59	0.45	0.95	4	12	0.6	2	
			0.35	0.6	1.1	26	88	0.52	2	
		12	3.1	0.75	1.25	9	19	2.9	2	
			3.1	0.5	1.5	6	18	1.65	1.8	
			1	0.5	1.5	6.5	14	0.7	2	
			20	0.18	0.8	1.5	10	51	0.34	yes
	60	20	0.18	0.8	1.5	6	11	0.33	yes	
			0.26	0.5	1.5	7.9	12.5	0.49	2	
			0.17	1.1	2.1	12	34	0.33	yes	
			0.26	1.1	2.1	4.7	6.9	1	2	
P-channel	20	8	4.5	0.45	0.95	7	41	6.3	2	
			0.5	0.45	0.95	2.3	13.5	1.19	1	
			3.7	0.45	0.95	6	47	5.4	2	
		12	4.5	0.47	0.9	4	135	16.5	-	
			4.2	0.75	1	7	33	5	2	
			3.7	0.4	1	6	120	5.7	-	
	30	8	0.41	0.45	0.95	3	14	0.7	2	
			0.2	0.6	1.1	49	103	0.55	2	
		12	3.8	0.45	1	3	112	5.2	-	
	50	20	0.16	1.1	2.1	24	73	0.26	1	

## Small-signal MOSFETs complementary

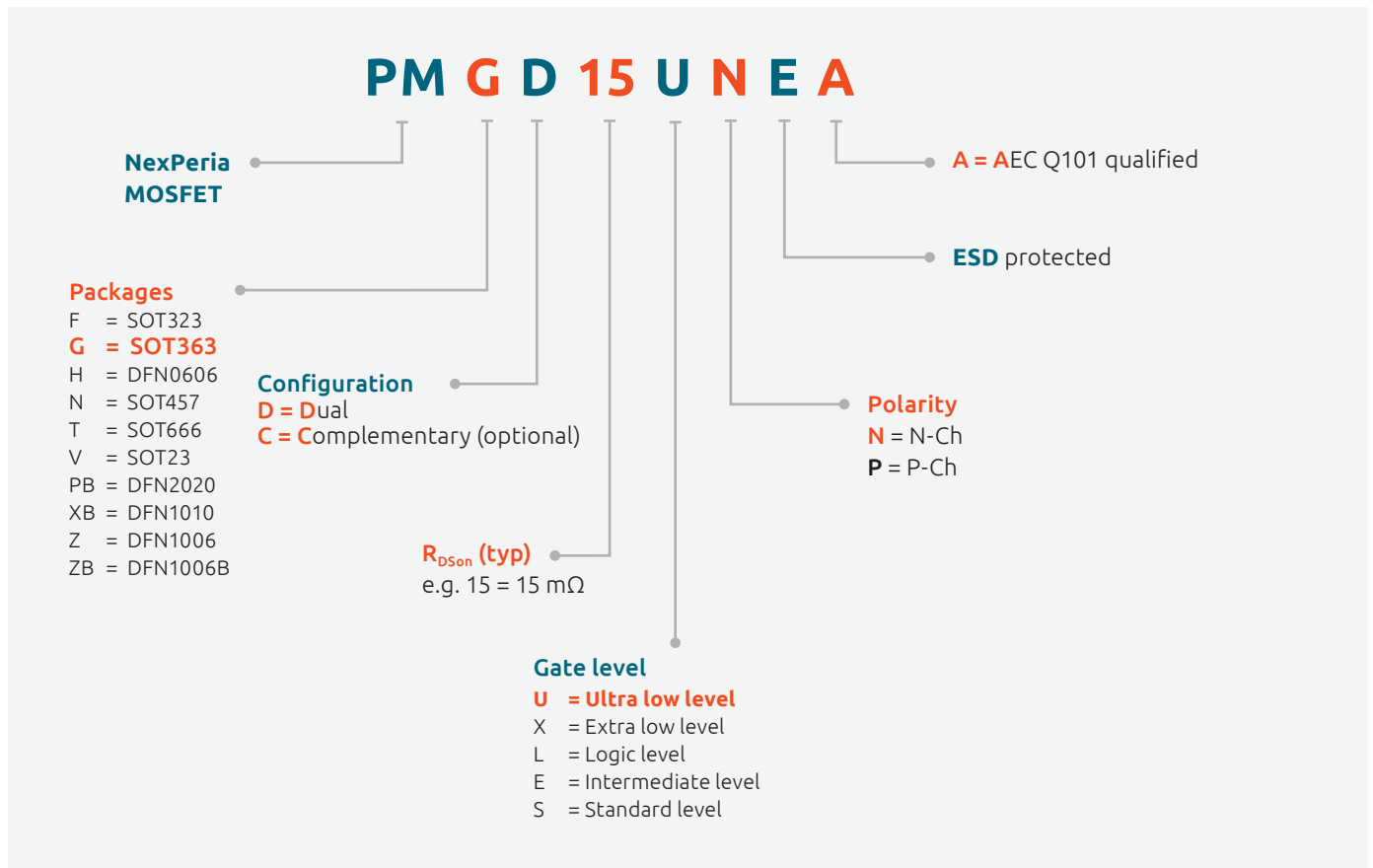
Package	Type	Polarity	V <sub>DS</sub> (V)	V <sub>GS</sub> (V)	I <sub>D</sub> (A)	V <sub>GS(th) min</sub> (V)	V <sub>GS(th) max</sub> (V)	
 SOT363 (SC-88) (2.0 x 1.25 x 0.95)	NX3008CBKS	N	30	8	0.35	0.6	1.1	
		P	30	8	0.2	0.6	1.1	
	NX6020CAKS	N	60	20	0.17	1.1	2.1	
		P	50	20	0.16	1.1	2.1	
 DFN1010B-6 (1.1 x 1.0 x 0.37)	PMCXB900UE	N	20	8	0.6	0.45	0.95	
		P	20	8	0.5	0.45	0.95	
	PMCXB1000UE	N	30	8	0.59	0.45	0.95	
		P	30	8	0.41	0.45	0.95	
 DFN2020-6 (2.0 x 2.0 x 0.65)	PMCPB5530X	N	20	12	5.3	0.4	0.9	
		P	20	12	4.5	0.47	0.9	

					SOT363 (SC-88)	DFN2020-6 (SOT1118)	DFN1010B-6 (SOT1216)		
									
					2.0 x 1.25 x 0.95	2.0 x 2.0 x 0.65	1.0 x 1.0 x 0.37		
					300	1250	350		
					R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =				
					10 V	4.5 V	2.5 V	1.8 V	
	-	470	620	845					PMDXB600UNE
	-	32	40	60					PMDPB30XN
	-	550	660	770					PMDXB550UNE
	-	1000	1400	2000	NX3008NBKS				
	-	55	72	-					PMDPB56XNEA
	-	95	130	-					PMDPB95XNE2
	-	170	240	-	PMGD175XNE				
	2700	3000	4000	-	NX3020NAKS				
	2800	3500	4500	-	NX138AKS				
	2100	2200	2600	-	NX138BKS				
	3000	3700	-	-	NX7002AKS				
	2200	2500	-	-	NX7002BKS				NX7002BKXB
	-	58	74	97					PMDPB58UPE
	-	1020	1270	1700					PMDXB950UPE
	-	82	107	142					PMDPB85UPE
	-	55	75	110					PMDPB55XP
	-	66	98	-					PMDPB70XPE
	-	80	95	120					PMDPB80XP
	-	1200	1700	2100					PMDXB1200UPE
	-	2800	5300	-	NX3008PBKS				
	-	70	89	-					PMDPB70XP
	4500	5700	-	-	BSS84AKS				

t <sub>on</sub> typ (ns)	t <sub>off</sub> typ (ns)	Q <sub>G</sub> typ (nC)	ESD protection (kV)	R <sub>DS(on)</sub> typ (mΩ) @ V <sub>GS</sub> =					
				10 V	4.5 V	2.5 V	1.8 V	1.5 V	1.2 V
26	88	0.52	2	-	1000	1400	2000	-	-
49	103	0.55	2	-	2800	5300	-	-	-
6	20	0.33	yes	3000	3700				
13	48	0.26	1	4500	5700				
5.6	19	0.4	1	-	470	620	845	1125	2210
2.3	13.5	1.19	1	-	1020	1270	1700	2300	3500
4	12	0.6	2	-	550	660	770	890	-
3	14	0.7	2	-	1200	1700	2100	3000	-
19	56	14.4	-	-	26	33	50	-	-
18	56	16.5	-	-	55	75	110	-	-

MOSFETs

## Small-signal MOSFETs nomenclature







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# Q100 Standard logic functions and packages

## Analog switches

Type number	Description	Features					Package (suffix)								
		Configuration	V <sub>cc</sub> (V)	R <sub>ON</sub> (Ω)	R <sub>ON</sub> (FLAT) (Ω)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)	SOT137-1 (D)	SOT355-1 (PW)	SOT1815-1 (BQ)
74HC4051-Q100	Single-pole, octal-throw analog switch	SP8T-Z	2.0 - 10.0	200	20	-40 to 125				•	•	•			
74HCT4051-Q100	Single-pole, octal-throw analog switch; TTL-enabled	SP8T-Z	4.5 - 5.5	225	20	-40 to 125				•	•	•			
74HC4052-Q100	Dual single-pole, quad-throw analog switch	SP4T-Z	2.0 - 10.0	200	20	-40 to 125				•	•	•			
74HCT4052-Q100	Dual single-pole, quad-throw analog switch; TTL-enabled	SP4T-Z	4.5 - 5.5	200	20	-40 to 125				•	•	•			
74HC4053-Q100	Triple single-pole, double-throw analog switch	SP8T-Z	2.0 - 10.0	200	20	-40 to 125				•	•	•			
74HCT4053-Q100	Triple single-pole, double-throw analog switch; TTL-enabled	SP8T-Z	4.5 - 5.5	200	20	-40 to 125				•	•	•			
74HC4066-Q100	Quad single-pole, single-throw analog switch	SPST-NO	2.0 - 10.0	105	23	-40 to 125	•	•	•						
74HCT4066-Q100	Quad single-pole, single-throw analog switch; TTL-enabled	SPST-NO	4.5 - 5.5	118	23	-40 to 125	•	•	•						
74HC4067-Q100	Single-pole, 16-throw analog switch	SP16T-Z	2.0 - 10.0	200	25	-40 to 125							•	•	•
74HCT4067-Q100	Single-pole, 16-throw analog switch; TTL-enabled	SP16T-Z	4.5 - 5.5	225	25	-40 to 125							•	•	•
74HC4851-Q100	Single-pole, octal-throw analog switch	SP8T-Z	2.0 - 10.0	220	-	-40 to 125				•	•	•			
74HCT4851-Q100	Single-pole, octal-throw analog switch; TTL-enabled	SP8T-Z	4.5 - 5.5	240	-	-40 to 125				•	•	•			
74HC4852-Q100	Dual single-pole, quad-throw analog switch	SP4T-Z	2.0 - 10.0	220	-	-40 to 125				•	•	•			
74HCT4852-Q100	Dual single-pole, quad-throw analog switch; TTL-enabled	SP4T-Z	4.5 - 5.5	240	-	-40 to 125				•	•	•			
74LV4052-Q100	Dual single-pole, quad-throw analog switch	SP4T-Z	1.0 - 6.0	125	15	-40 to 125				•	•				
74LV4053-Q100	Triple single-pole, double-throw analog switch	SPDT-Z	1.0 - 6.0	150	30	-40 to 125				•	•	•			
74LVC4066-Q100	Quad single-pole, single-throw analog switch	SPST-NO	1.65 - 5.5	15	1.5	-40 to 125	•	•	•						
HEF4051B-Q100	Single-pole, octal-throw analog switch	SP8T-Z	3.0 - 15	175	30	-40 to 85				•	•				
HEF4052B-Q100	Dual single-pole, quad-throw analog switch	SP4T-Z	3.0 - 15	175	30	-40 to 85				•	•				
HEF4053B-Q100	Triple single-pole, double-throw analog switch	SPDT-Z	3.0 - 15	175	30	-40 to 85				•	•				
HEF4066B-Q100	Quad single-pole, single-throw analog switch	SPST-NO	3.0 - 15	175	20	-40 to 85	•								
HEF4067B-Q100	Single-pole, 16-throw analog switch	SP16T-Z	3.0 - 15	175	20	-40 to 85							•		



## Buffers/Inverters

Type number	Description	Features				Package (suffix)									
		V <sub>cc</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT362-1 (DGG)	SOT480-1 (DGV)
74AHC04-Q100	Hex inverter	2.0 - 5.5	± 8	3.0	-40 to 125	•	•	•							
74AHT04-Q100	Hex inverter; TTL-enabled	4.5 - 5.5	± 8	3.0	-40 to 125	•	•	•							
74AHC125-Q100	Quad buffer/line driver (3-state)	2.0 - 5.5	± 8	3.0	-40 to 125	•	•	•							
74AHT125-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.0	-40 to 125	•	•	•							
74AHC126-Q100	Quad buffer/line driver (3-state)	2.0 - 5.5	± 8	3.3	-40 to 125	•	•	•							
74AHT126-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.0	-40 to 125	•	•	•							
74AHC240-Q100	Octal inverter/line driver (3-state)	2.0 - 5.5	± 8	2.8	-40 to 125						•	•	•		
74AHT240-Q100	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.0	-40 to 125						•	•	•		
74AHC244-Q100	Octal buffer/line driver (3-state)	2.0 - 5.5	± 8	3.5	-40 to 125						•	•	•		•
74AHT244-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.5	-40 to 125						•	•	•		
74AHC541-Q100	Octal buffer/line driver (3-state)	2.0 - 5.5	± 8	3.5	-40 to 125						•	•	•		
74AHT541-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.5	-40 to 125						•	•	•		
74AHCU04-Q100	Hex inverter; unbuffered	2.0 - 5.5	± 8	2.4	-40 to 125	•	•	•							
74ALVC125-Q100	Quad buffer/line driver (3-state)	1.65 - 3.6	± 24	1.8	-40 to 85	•	•	•							
74ALVC541-Q100	Octal buffer/line driver (3-state)	1.65 - 3.6	± 24	2.3	-40 to 85						•	•	•		•
74HC05-Q100	Hex inverter; open-drain	2.0 - 6.0	5.2	11	-40 to 125	•	•	•							
74HC04-Q100	Hex inverter	2.0 - 6.0	± 5.2	7.0	-40 to 125	•	•	•							
74HCT04-Q100	Hex inverter; TTL-enabled	4.5 - 5.5	± 4.0	8.0	-40 to 125	•	•	•							
74HC125-Q100	Quad buffer/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40 to 125	•	•								
74HCT125-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	12	-40 to 125	•	•								
74HC126-Q100	Quad buffer/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40 to 125	•	•								
74HCT126-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40 to 125	•	•								
74HC240-Q100	Octal inverter/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40 to 125						•	•	•		
74HCT240-Q100	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	9.0	-40 to 125						•	•	•		
74HC244-Q100	Octal buffer/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40 to 125						•	•	•		
74HCT244-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40 to 125						•	•	•		
74HC365-Q100	Hex buffer/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40 to 125						•	•			
74HCT365-Q100	Hex buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40 to 125						•	•			
74HC366-Q100	Hex inverter/line driver (3-state)	2.0 - 6.0	± 7.8	10	-40 to 125						•	•			
74HCT366-Q100	Hex inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40 to 125						•	•			
74HC540-Q100	Octal inverter/line driver (3-state)	2.0 - 6.0	± 7.8	9.0	-40 to 125						•				
74HCT540-Q100	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	11	-40 to 125						•				
74HC541-Q100	Octal buffer/line driver (3-state)	2.0 - 6.0	± 7.8	10	-40 to 125						•	•			

## Buffers/Inverters

Type number	Description	Features				Package (suffix)									
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT362-1 (DGG)	SOT480-1 (DGV)
74HCT541-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 6	12	-40 to 125						•	•			
74HCU04-Q100	Hex inverter; unbuffered	2.0 - 6.0	± 5.2	5.0	-40 to 125	•	•	•							
74LV244-Q100	Octal buffer/line driver (3-state)	1.0 - 5.5	± 16	8.0	-40 to 125						•	•			
74LVC04A-Q100	Hex inverter	1.65 - 5.5	± 24	2.0	-40 to 125	•	•	•							
74LVC06A-Q100	Hex inverter; open-drain	1.65 - 5.5	32	2.2	-40 to 125	•	•	•							
74LVC07A-Q100	Hex buffer; open-drain	1.65 - 5.5	32	2.2	-40 to 125	•	•	•							
74LVC125A-Q100	Quad buffer/line driver (3-state)	1.2 - 3.6	± 24	2.4	-40 to 125	•	•	•							
74LVC126A-Q100	Quad buffer/line driver (3-state)	1.2 - 3.6	± 24	2.4	-40 to 125	•	•	•							
74LVC541A-Q100	Octal buffer/line driver (3-state)	1.2 - 3.6	± 24	3.3	-40 to 125						•	•	•		
74LVC16240A-Q100	16-bit inverter/line driver (3-state)	1.2 - 3.6	± 24	2.7	-40 to 125									•	
74LVC244A-Q100	Octal buffer/line driver (3-state)	1.2 - 3.6	± 24	2.8	-40 to 125						•	•	•		
74LVCH244A-Q100	Octal buffer/line driver with bus hold (3-state)	1.2 - 3.6	± 24	2.8	-40 to 125						•	•	•		
74LVC16244A-Q100	16-bit buffer/line driver (3-state)	1.2 - 3.6	± 24	3.0	-40 to 125									•	•
74LVCH16244A-Q100	16-bit buffer/line driver with bus hold (3-state)	1.2 - 3.6	± 24	3.0	-40 to 125									•	•
74LVCU04A-Q100	Hex inverter; unbuffered	1.2 - 3.6	± 24	2.0	-40 to 125	•	•								
74LVT04-Q100	Hex inverter	2.7 - 3.6	-20 / +32	2.6	-40 to 85	•	•								
74LVT244A-Q100	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	-32 / +64	2.6	-40 to 85						•	•			
74LVTH244A-Q100	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	-32 / +64	2.6	-40 to 85						•	•			
74VHC126-Q100	Quad buffer/line driver (3-state)	2.0 - 5.5	± 8	3.3	-40 to 125	•	•	•							
74VHCT126-Q100	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.0	-40 to 125	•	•	•							
74VHC541-Q100	Octal buffer/line driver (3-state)	2.0 - 5.5	± 8	3.5	-40 to 125						•	•	•		
74VHCT541-Q100	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.5	-40 to 125						•	•	•		
HEF4049B-Q100	Hex inverter/line driver	3.0 - 15.0	-3 / +20	20	-40 to 85				•						
HEF4050B-Q100	Hex buffer/line driver	3.0 - 15.0	-3 / +20	40	-40 to 85				•						
HEF4069UB-Q100	Hex inverter; unbuffered	3.0 - 15.0	± 3.4	15	-40 to 85	•	•								

## Counters/Frequency dividers

Type number	Description	Features				Package (suffix)					
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)
74HC161-Q100	Presetable synchronous 4-bit binary counter; asynchronous reset	2.0 - 6.0	± 5.2	19	-40 to 125				•	•	
74HC163-Q100	Presetable synchronous 4-bit binary counter; synchronous reset	2.0 - 6.0	± 5.2	17	-40 to 125				•	•	
74HCT163-Q100	Presetable synchronous 4-bit binary counter; synchronous reset; TTL-enabled	4.5 - 5.5	± 4.0	20	-40 to 125				•	•	
74HC193-Q100	Presetable synchronous 4-bit binary up/down counter	2.0 - 6.0	± 5.2	20	-40 to 125				•	•	
74HCT193-Q100	Presetable synchronous 4-bit binary up/down counter; TTL-enabled	4.5 - 5.5	± 4.0	20	-40 to 125				•	•	
74HC393-Q100	Dual 4-bit binary ripple counter	2.0 - 6.0	± 5.2	12	-40 to 125	•	•	•			
74HCT393-Q100	Dual 4-bit binary ripple counter; TTL-enabled	4.5 - 5.5	± 4.0	20	-40 to 125	•	•	•			
74HC4017-Q100	Johnson decade counter with 10 decoded outputs	2.0 - 6.0	± 5.2	18	-40 to 125				•	•	•
74HCT4017-Q100	Johnson decade counter with 10 decoded outputs; TTL-enabled	4.5 - 5.5	± 4.0	21	-40 to 125				•		•
74HC4020-Q100	14-stage binary ripple counter	2.0 - 6.0	± 5.2	11	-40 to 125				•	•	•
74HCT4020-Q100	14-stage binary ripple counter; TTL-enabled	4.5 - 5.5	± 4.0	15	-40 to 125				•	•	•
74HC4024-Q100	7-stage binary ripple counter	2.0 - 6.0	± 5.2	14	-40 to 125	•	•				
74HC4040-Q100	12-stage binary ripple counter	2.0 - 6.0	± 5.2	14	-40 to 125				•	•	•
74HCT4040-Q100	12-stage binary ripple counter; TTL-enabled	4.5 - 5.5	± 4.0	16	-40 to 125				•	•	•
74HC4060-Q100	14-stage binary ripple counter with oscillator	2.0 - 6.0	± 5.2	31	-40 to 125				•	•	•
74HCT4060-Q100	14-stage binary ripple counter with oscillator; TTL-enabled	4.5 - 5.5	± 4.0	31	-40 to 125				•		•
74HC4520-Q100	Dual 4-bit synchronous binary counter	2.0 - 6.0	± 5.2	24	-40 to 125				•		
74HCT4520-Q100	Dual 4-bit synchronous binary counter; TTL-enabled	4.5 - 5.5	± 4.0	24	-40 to 125				•		
74LV393-Q100	Dual 4-bit binary ripple counter	1.0 - 3.6	± 6	12	-40 to 125	•	•				
HEF4017B-Q100	5-stage Johnson decade counter	3.0 - 15	± 2.4	40	-40 to 85				•		
HEF4020B-Q100	14-stage binary ripple counter	3.0 - 15	± 2.4	30	-40 to 85				•		
HEF4040B-Q100	12-stage binary ripple counter	3.0 - 15	± 2.4	35	-40 to 85				•		
HEF4060B-Q100	14-stage binary ripple counter with oscillator	3.0 - 15	± 2.4	50	-40 to 85				•		
HEF4541B-Q100	Programmable timer	3.0 - 15	-4/ + 2.7	38	-40 to 85	•					
HEF4520B-Q100	Dual 4-bit synchronous binary counter	3.0 - 15	± 2.4	15	-40 to 85				•		

## Bus switches

Types in **bold** represent new products

Type number	Description	Features				Package (suffix)							
		V <sub>CC</sub> (V)	V <sub>PASS</sub> (V)	R <sub>ON</sub> (Ω)	T <sub>amb</sub> (°C)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)
<b>74CB3Q3257-Q100</b>	4-bit 1-of-2 mux/demux with charge pump	2.3 - 3.6	3.3	4	-40 to 85				•				
74CBTLV3125-Q100	Quad bus switch	2.3 - 3.6	3.3	7	-40 to 125	•							
74CBTLV3126-Q100	Quad bus switch	2.3 - 3.6	3.3	7	-40 to 125	•	•						
74CBTLV3253-Q100	Dual 4:1 mux/demux	2.3 - 3.6	3.3	7	-40 to 125			•	•	•			
74CBTLV3257-Q100	Quad 2:1 mux/demux	2.3 - 3.6	3.3	7	-40 to 125			•	•	•			
74CBTLV3245-Q100	Octal bus switch	2.3 - 3.6	3.3	7	-40 to 125						•	•	
74CBTLVD3245-Q100	Octal bus switch level translator	3.0 - 3.6	1.8	7	-40 to 125						•	•	
CBT3245A-Q100	Octal bus switch	4.0 - 5.5	3.9	7	-40 to 85					•	•	•	

## Digital decoders/Demultiplexers

Type number	Description	Features				Package (suffix)		
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)
74AHC138-Q100	3-to-8 line decoder/demultiplexer; inverting	2.0 - 5.5	± 8	4.4	-40 to 125	•	•	•
74AHCT138-Q100	3-to-8 line decoder/demultiplexer; inverting; TTL-enabled	4.5 - 5.5	± 8	4.4	-40 to 125	•	•	•
74AHC139-Q100	Dual 2-to-4 line decoder/demultiplexer	2.0 - 5.5	± 8	3.9	-40 to 125	•	•	
74AHCT139-Q100	Dual 2-to-4 line decoder/demultiplexer; TTL-enabled	4.5 - 5.5	± 8	3.6	-40 to 125	•	•	
74HC237-Q100	3-to-8 decoder/demultiplexer with address latches	2.0 - 6.0	± 5.2	18	-40 to 125	•		
74HC138-Q100	3-to-8 line decoder/demultiplexer; inverting	2.0 - 6.0	± 5.2	12	-40 to 125	•	•	•
74HCT138-Q100	3-to-8 line decoder/demultiplexer; inverting; TTL-enabled	4.5 - 5.5	± 4	19	-40 to 125	•	•	•
74HC139-Q100	Dual 2-to-4 line decoder/demultiplexer	2.0 - 6.0	± 5.2	14	-40 to 125	•	•	
74HCT139-Q100	Dual 2-to-4 line decoder/demultiplexer; TTL-enabled	4.5 - 5.5	± 4	16	-40 to 125	•	•	
74HC238-Q100	3-to-8 decoder/demultiplexer	2.0 - 6.0	± 5.2	14	-40 to 125	•	•	•
74HCT238-Q100	3-to-8 decoder/demultiplexer; TTL-enabled	4.5 - 5.5	± 4	18	-40 to 125	•	•	•
74LVC138A-Q100	3-to-8 line decoder/demultiplexer; inverting	1.2 - 3.6	± 24	2.7	-40 to 125	•	•	•
HEF4555B-Q100	Dual 1-to-4 line decoder/demultiplexer	3.0 - 15	± 2.4	30	-40 to 85	•		

## Digital multiplexers

Type number	Description	Features				Package (suffix)		
		V <sub>cc</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)
74AHC157-Q100	Quad 2-input multiplexer	2.0 - 5.5	± 8	3.2	-40 to 125	•	•	•
74AHCT157-Q100	Quad 2-input multiplexer; TTL-enabled	4.5 - 5.5	± 8	3.2	-40 to 125	•	•	•
74AHC257-Q100	Quad 2-input multiplexer (3-State)	2.0 - 5.5	± 8	2.9	-40 to 125	•	•	
74AHCT257-Q100	Quad 2-input multiplexer; TTL-enabled (3-State)	4.5 - 5.5	± 8	3.7	-40 to 125	•	•	
74HC151-Q100	8-input multiplexer	2.0 - 6.0	± 5.2	17	-40 to 125	•	•	
74HCT151-Q100	8-input multiplexer; TTL-enabled	4.5 - 5.5	± 4	19	-40 to 125	•	•	
74HC153-Q100	Dual 4-input multiplexer	2.0 - 6.0	± 5.2	17	-40 to 125	•	•	
74HCT153-Q100	Dual 4-input multiplexer; TTL-enabled	4.5 - 5.5	± 4	19	-40 to 125	•	•	
74HC157-Q100	Quad 2-input multiplexer	2.0 - 6.0	± 5.2	11	-40 to 125	•	•	•
74HCT157-Q100	Quad 2-input multiplexer; TTL-enabled	4.5 - 5.5	± 4	13	-40 to 125	•	•	•
74HC251-Q100	8-input multiplexer (3-State)	2.0 - 6.0	± 5.2	18	-40 to 125	•	•	
74HCT251-Q100	8-input multiplexer; TTL-enabled (3-State)	4.5 - 5.5	± 4	22	-40 to 125	•	•	
74HC253-Q100	Dual 4-input multiplexer (3-State)	2.0 - 6.0	± 7.8	17	-40 to 125	•		
74HCT253-Q100	Dual 4-input multiplexer; TTL-enabled (3-State)	4.5 - 5.5	± 6	17	-40 to 125	•		
74HC257-Q100	Quad 2-input multiplexer (3-State)	2.0 - 6.0	± 7.8	11	-40 to 125	•	•	
74HCT257-Q100	Quad 2-input multiplexer; TTL-enabled (3-State)	4.5 - 5.5	± 6	13	-40 to 125	•	•	
74LVC157A-Q100	Quad 2-input multiplexer	1.2 - 3.6	± 24	2.5	-40 to 125	•	•	•

## Flip-flops

Type number	Description	Features				Package (suffix)									
		V <sub>cc</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT815-1 (BQ)	SOT362-1 (DGG)
74AHC74-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger	2.0 - 5.5	± 8	3.7	-40 to 125	•	•	•							
74AHCT74-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 8	3.3	-40 to 125	•	•	•							
74AHC273-Q100	Octal D-type flip-flop with reset; positive-edge trigger	2.0 - 5.5	± 8	4.2	-40 to 125						•	•	•		
74AHCT273-Q100	Octal D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 8	4.0	-40 to 125						•	•	•		
74AHC374-Q100	Octal D-type flip-flop; positive-edge trigger	2.0 - 5.5	± 8	4.4	-40 to 125						•	•			
74AHCT374-Q100	Octal D-type flip-flop; positive-edge trigger (3-state); TTL-enabled (3-state)	4.5 - 5.5	± 8	4.3	-40 to 125						•	•			
74AHC377-Q100	Octal D-type flip-flop with data enable; positive-edge trigger	2.0 - 5.5	± 8	3.9	-40 to 125							•			
74AHCT377-Q100	Octal D-type flip-flop with data enable; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 8	4.0	-40 to 125							•	•		
74AVC16374-Q100	16-bit D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	± 12	1.5	-40 to 85										•

## Flip-flops

Type number	Description	Features				Package (suffix)									
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT815-1 (BQ)	SOT362-1 (DGG)
74HC74-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger	2.0 - 6.0	± 5.2	14	-40 to 125	•	•	•							
74HCT74-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	15	-40 to 125	•	•	•							
74HC107-Q100	Dual J-K flip-flop with reset; negative-edge trigger	2.0 - 6.0	± 5.2	16	-40 to 125	•	•								
74HCT107-Q100	Dual J-K flip-flop with reset; negative-edge trigger; TTL-enabled	4.5 - 5.5	± 4	16	-40 to 125	•									
74HC109-Q100	Dual J-K flip-flop with set and reset; positive-edge trigger	2.0 - 6.0	± 5.2	15	-40 to 125				•						
74HCT109-Q100	Dual J-K flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	17	-40 to 125				•						
74HC174-Q100	Hex D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	± 5.2	17	-40 to 125				•	•					
74HCT174-Q100	Hex D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	18	-40 to 125				•	•					
74HC175-Q100	Quad D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	± 5.2	17	-40 to 125				•	•					
74HCT175-Q100	Quad D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	16	-40 to 125				•	•					
74HC273-Q100	Octal D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	± 5.2	15	-40 to 125						•	•	•		
74HCT273-Q100	Octal D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 4	15	-40 to 125						•	•	•		
74HC377-Q100	Octal D-type flip-flop with data enable; positive-edge trigger	2.0 - 6.0	± 7.8	13	-40 to 125						•	•			
74HCT377-Q100	Octal D-type flip-flop with data enable; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 6	14	-40 to 125						•	•			
74HC574-Q100	Octal D-type flip-flop; positive-edge trigger (3-state)	2.0 - 6.0	± 7.8	14	-40 to 125						•	•			
74HCT574-Q100	Octal D-type flip-flop; positive-edge trigger; TTL-enabled (3-state)	4.5 - 5.5	± 6	15	-40 to 125						•	•			
74LV74-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger	1.0 - 5.5	± 12	11	-40 to 125	•	•								
74LVC74A-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger	1.2 - 3.6	± 24	2.5	-40 to 125	•	•	•							
74LVC273-Q100	Octal D-type flip-flop with reset; positive-edge trigger	1.2 - 3.6	± 24	6.0	-40 to 125						•	•	•		
74LVC374A-Q100	Octal D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	± 24	2.7	-40 to 125						•	•	•		

## Flip-flops

Type number	Description	Features				Package (suffix)									
		$V_{CC}$ (V)	$I_o$ (mA)	$t_{pd}$ (ns)	$T_{amb}$ (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT815-1 (BQ)	SOT362-1 (DGG)
74LVC573A-Q100	Octal D-type transparent latch (3-state)	1.2 - 3.6	± 24	3.4	-40 to 125						•	•	•		
74LVC823A-Q100	9-bit D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	± 24	5.4	-40 to 125									•	
74LVC16374A-Q100	16-bit D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	± 24	3.8	-40 to 125										•
74LVCH16374A-Q100	16-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	1.2 - 3.6	± 24	3.8	-40 to 125										•
HEF4013B-Q100	Dual D-type flip-flop with set and reset; positive-edge trigger	3.0 - 15	± 2.4	30	-40 to 85	•	•								
HEF4027B-Q100	Dual J-K flip-flop	3.0 - 15	± 2.4	30	-40 to 85				•						

## Gates

Type number	Description	Features				Package (suffix)			
		$V_{CC}$ (V)	$I_o$ (mA)	$t_{pd}$ (ns)	$T_{amb}$ (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT765-1 (DC)
74AHC00-Q100	Quad 2-input NAND gate	2.0 - 5.5	± 8	3.2	-40 to 125	•	•	•	
74AHCT00-Q100	Quad 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 8	3.3	-40 to 125	•	•	•	
74AHC02-Q100	Quad 2-input NOR gate	2.0 - 5.5	± 8	2.9	-40 to 125	•	•	•	
74AHCT02-Q100	Quad 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 8	3.8	-40 to 125	•	•	•	
74AHC08-Q100	Quad 2-input AND gate	2.0 - 5.5	± 8	3.5	-40 to 125	•	•	•	
74AHCT08-Q100	Quad 2-input AND gate; TTL-enabled	4.5 - 5.5	± 8	5.0	-40 to 125	•	•	•	
74AHC30-Q100	8-input NAND gate	2.0 - 5.5	± 8	3.6	-40 to 125	•	•	•	
74AHCT30-Q100	8-input NAND gate; TTL-enabled	4.5 - 5.5	± 8	3.3	-40 to 125	•	•	•	
74AHC32-Q100	Quad 2-input OR gate	2.0 - 5.5	± 8	3.5	-40 to 125	•	•	•	
74AHCT32-Q100	Quad 2-input OR gate; TTL-enabled	4.5 - 5.5	± 8	5.0	-40 to 125	•	•	•	
74AHC86-Q100	Quad 2-input EXCLUSIVE-OR gate	2.0 - 5.5	± 8	3.4	-40 to 125	•	•	•	
74AHCT86-Q100	Quad 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	± 8	3.4	-40 to 125	•	•	•	
74ALVC00-Q100	Quad 2-input NAND gate	1.65 - 3.6	± 24	2.1	-40 to 85	•	•	•	

## Gates

Types in **bold** represent new products

Type number	Description	Features				Package (suffix)			
		V <sub>cc</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT765-1 (DC)
74ALVC32-Q100	Quad 2-input OR gate	1.65 - 3.6	± 24	2.0	-40 to 125	•	•	•	
<b>74AUP2G00-Q100</b>	Dual 2-input NAND gate	2.0 - 5.5	± 8	3.2	-40 to 125				•
74HC00-Q100	Quad 2-input NAND gate	2.0 - 6.0	± 5.2	7.0	-40 to 125	•	•	•	
74HCT00-Q100	Quad 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 4	10	-40 to 125	•	•	•	
74HC02-Q100	Quad 2-input NOR gate	2.0 - 6.0	± 5.2	7.0	-40 to 125	•	•	•	
74HCT02-Q100	Quad 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 4	9.0	-40 to 125	•	•	•	
74HC03-Q100	Quad 2-input NAND gate; open-drain	2.0 - 6.0	5.2	8.0	-40 to 125	•	•		
74HCT03-Q100	Quad 2-input NAND gate; open-drain; TTL-enabled	4.5 - 5.5	± 4	10	-40 to 125	•	•		
74HC08-Q100	Quad 2-input AND gate	2.0 - 6.0	± 5.2	7.0	-40 to 125	•	•	•	
74HCT08-Q100	Quad 2-input AND gate; TTL-enabled	4.5 - 5.5	± 4	11	-40 to 125	•	•	•	
74HC10-Q100	Triple 3-input NAND gate	2.0 - 6.0	± 5.2	9.0	-40 to 125	•	•		
74HCT10-Q100	Triple 3-input NAND gate; TTL-enabled	4.5 - 5.5	± 4	11	-40 to 125	•	•		
74HC11-Q100	Triple 3-input AND gate	2.0 - 6.0	± 5.2	10	-40 to 125	•	•		
74HCT11-Q100	Triple 3-input AND gate; TTL-enabled	4.5 - 5.5	± 4	11	-40 to 125	•	•		
74HC20-Q100	Dual 4-input NAND gate	2.0 - 6.0	± 5.2	8.0	-40 to 125	•	•		
74HCT20-Q100	Dual 4-input NAND gate; TTL-enabled	4.5 - 5.5	± 4	13	-40 to 125	•		•	
74HC27-Q100	Triple 3-input NOR gate	2.0 - 6.0	± 5.2	8.0	-40 to 125	•	•	•	
74HCT27-Q100	Triple 3-input NOR gate; TTL-enabled	4.5 - 5.5	± 4	10	-40 to 125	•	•	•	
74HC30-Q100	8-input NAND gate	2.0 - 6.0	± 5.2	12	-40 to 125	•	•		
74HCT30-Q100	8-input NAND gate; TTL-enabled	4.5 - 5.5	± 4	12	-40 to 125	•	•		
74HC32-Q100	Quad 2-input OR gate	2.0 - 6.0	± 5.2	6.0	-40 to 125	•	•	•	
74HCT32-Q100	Quad 2-input OR gate; TTL-enabled	4.5 - 5.5	± 4.0	9.0	-40 to 125	•	•	•	
74HC86-Q100	Quad 2-input EXCLUSIVE-OR gate	2.0 - 6.0	± 5.2	11	-40 to 125	•	•		
74HCT86-Q100	Quad 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	± 4	14	-40 to 125	•	•		
74HC4002-Q100	Dual 4-input NOR gate	2.0 - 6.0	± 5.2	9.0	-40 to 125	•	•		
74HC4075-Q100	Triple 3-input OR gate	2.0 - 6.0	± 5.2	8.0	-40 to 125	•	•		
74HCT4075-Q100	Triple 3-input OR gate; TTL-enabled	4.5 - 5.5	± 4	10	-40 to 125	•	•		
74LV08-Q100	Quad 2-input AND gate	1.0 - 5.5	± 12	7.0	-40 to 125	•	•		
74LVC00A-Q100	Quad 2-input NAND gate	1.2 - 3.6	± 24	2.1	-40 to 125	•	•	•	
74LVC02A-Q100	Quad 2-input NOR gate	1.2 - 3.6	± 24	2.1	-40 to 125	•	•	•	
74LVC08A-Q100	Quad 2-input AND gate	1.2 - 3.6	± 24	2.1	-40 to 125	•	•	•	
74LVC11-Q100	Triple 3-input AND gate	1.2 - 3.7	± 24	3.7	-40 to 125	•	•		
74LVC32A-Q100	Quad 2-input OR gate	1.2 - 3.6	± 24	2.1	-40 to 125	•	•	•	
74VHC02-Q100	Quad 2-input NOR gate	2.0 - 5.5	± 8	2.9	-40 to 125	•	•	•	



## Gates

Type number	Description	Features				Package (suffix)			
		V <sub>cc</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT765-1 (DC)
74VHCT02-Q100	Quad 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 8	3.8	-40 to 125	•	•	•	
74VHCT08-Q100	Quad 2-input AND gate; TTL-enabled	4.5 - 5.5	± 8	5.0	-40 to 125	•	•	•	
74VHC32-Q100	Quad 2-input OR gate	2.0 - 5.5	± 8	3.5	-40 to 125	•	•		
74VHCT32-Q100	Quad 2-input OR gate; TTL-enabled	4.5 - 5.5	± 8	5.0	-40 to 125	•	•	•	
HEF4001B-Q100	Quad 2-input NOR gate	3.0 - 15	± 2.4	20	-40 to 85	•			
HEF4011B-Q100	Quad 2-input NAND gate	3.0 - 15	± 2.4	20	-40 to 85	•			
HEF4030B-Q100	Quad 2-input EXCLUSIVE-OR gate	3.0 - 15	± 2.4	30	-40 to 85	•			
HEF4070B-Q100	Quad 2-input EXCLUSIVE-OR gate	3.0 - 15	± 2.4	30	-40 to 85	•			
HEF4081B-Q100	Quad 2-input AND gate	3.0 - 15	± 2.4	20	-40 to 85	•			
HEF4082B-Q100	Dual 4-input AND gate	3.0 - 15	± 2.4	25	-40 to 85	•			

## Latches/Registered drivers

Type number	Description	Features				Package (suffix)							
		V <sub>cc</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT362-1 (DGC)	SOT480-1 (DGV)
74AHC573-Q100	Octal D-type transparent latch (3-state)	2.0 - 5.5	± 8	4.2	-40 to 125				•	•	•		
74AHCT573-Q100	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.9	-40 to 125				•	•	•		
74HC259-Q100	8 bit addressable latch	2.0 - 6.0	± 5.2	18	-40 to 125	•	•	•					
74HCT259-Q100	8 bit addressable latch; TTL-enabled	4.5 - 5.5	± 4	20	-40 to 125	•	•	•					
74HC373-Q100	Octal D-type transparent latch (3-state)	2.0 - 6.0	± 7.8	12	-40 to 125				•	•	•		
74HCT373-Q100	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	± 6	14	-40 to 125				•	•	•		
74HC573-Q100	Octal D-type transparent latch (3-state)	2.0 - 6.0	± 7.8	14	-40 to 125				•	•	•		
74HCT573-Q100	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	± 6	17	-40 to 125				•	•	•		
74LVC373A-Q100	Octal D-type transparent latch (3-state)	1.2 - 3.6	± 24	3.0	-40 to 125				•	•	•		
74LVC16373A-Q100	16-bit D-type transparent latch (3-state)	1.2 - 3.6	± 24	2.4	-40 to 125							•	•
74LVCH16373A-Q100	16-bit D-type transparent latch with bushold (3-state)	1.2 - 3.6	± 24	2.4	-40 to 125							•	•
HEF4043B-Q100	Quad R/S latch with set and reset (3-state)	3.0 - 15	± 2.4	25	-40 to 85	•							

## Level shifters/Translators

Types in **bold** represent new products

Type number	Description	Features				Package (suffix)													
		V <sub>cc</sub> (A) (V)	V <sub>cc</sub> (B) (V)	I <sub>o</sub> (mA)	T <sub>amb</sub> (°C)	SOT402-1 (PW)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)	SOT137-1 (D)	SOT355-1 (PW)	SOT815-1 (BQ)	SOT362-1 (DGG)	SOT480-1 (DGV)	SOT364-1 (DGG)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT762-1 (BQ)	SOT1161-1 (GU)
74ALVC164245-Q100	16-bit dual-supply voltage level translating transceiver (3-state)	1.5 - 3.6	1.5 - 5.5	± 24	-40 to 125							•							
74AVC4T245-Q100	4-bit dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125		•	•	•										•
74AVC8T245-Q100	8-bit dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125					•	•								
74AVC16T245-Q100	16-bit dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125							•							
74AVC20T245-Q100	20-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125								•						
74AVCH4T245-Q100	4-bit dual-supply voltage translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125		•	•	•										
74HC4050-Q100	Hex buffer with 15V tolerant inputs	2.0 - 6.0	n.a	± 5.2	-40 to 125		•	•											
74LVC4T3144-Q100	4-bit dual supply buffer/line driver (3-state)	1.2 to 5.5	1.2 to 5.5	± 24	-40 to 125	•													
74LVC4245A-Q100	8-bit dual-supply voltage translating transceiver (3-state)	1.5 - 5.5	1.5 - 3.6	± 24	-40 to 125					•	•	•							
74LVC8T245-Q100	8-bit dual-supply voltage translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40 to 125					•	•								
74LVCH8T245-Q100	8-bit dual-supply voltage translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40 to 125					•	•								
HEF4104B-Q100	Quad low-to-high voltage translator (3-state)	3.0 - 15.0	3.0 - 15.0	± 2.4	-40 to 85		•												
<b>LSF0108-Q100</b>	8-bit bidirectional level translator; open-drain; push-pull	0.95 - 5.0	0.95 - 5.0	+64	-40 to 125										•	•			
<b>NXB0104-Q100</b>	Dual supply translator; auto direction sensing (3-state)	1.2 - 3.6	1.65 - 5.5	± 0.02	-40 to 125	•													•
<b>NXS0104-Q100</b>	Dual supply translating transceiver; open drain; autosense	1.65 - 3.6	2.3 - 5.5	-0.02/+1	-40 to 125	•													•

## Multivibrators

Type number	Description	Features				Package (suffix)		
		V <sub>cc</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)
74AHC123A-Q100	Dual retriggerable monostable multivibrator with reset	2.0 - 5.5	± 8	5.1	-40 to 125	•	•	•
74AHC123A-Q100	Dual retriggerable monostable multivibrator with reset; TTL-enabled	4.5 - 5.5	± 8	5.0	-40 to 125	•	•	•
74HC123-Q100	Dual retriggerable monostable multivibrator with reset	2.0 - 6.0	± 7.8	9.0	-40 to 125	•	•	•
74HCT123-Q100	Dual retriggerable monostable multivibrator with reset; TTL-enabled	4.5 - 5.5	± 4	26	-40 to 125	•	•	•
74HC4538-Q100	Dual retriggerable precision monostable multivibrator	2.0 - 6.0	± 5.2	27	-40 to 125	•	•	
74HCT4538-Q100	Dual retriggerable precision monostable multivibrator; TTL-enabled	4.5 - 5.5	± 4	30	-40 to 125	•	•	
HEF4528B-Q100	Dual retriggerable monostable multivibrator with reset	3.0 - 15	± 2.4	40	-40 to 85	•		
HEF4538B-Q100	Dual retriggerable precision monostable multivibrator	3.0 - 15	± 2.4	60	-40 to 85	•		

## Schmitt-triggers

Type number	Description	Features				Package (suffix)				
		$V_{CC}$ (V)	$I_o$ (mA)	$t_{pd}$ (ns)	$T_{amb}$ (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT163-1 (D)	SOT360-1 (PW)
74AHC14-Q100	Hex inverter Schmitt-trigger	2.0 - 5.5	± 8	3.2	-40 to 125	•	•	•		
74AHCT14-Q100	Hex inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 8	4.0	-40 to 125	•	•	•		
74AHC132-Q100	Quad 2-input NAND gate Schmitt-trigger	2.0 - 5.5	± 8	3.3	-40 to 125	•	•	•		
74AHCT132-Q100	Quad 2-input NAND gate Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 8	3.5	-40 to 125	•	•	•		
74HC7014-Q100	Hex buffer precision Schmitt-trigger	2.0 - 6.0	± 5.2	27	-40 to 125	•				
74HC14-Q100	Hex inverter Schmitt-trigger	2.0 - 6.0	± 5.2	12	-40 to 125	•	•	•		
74HCT14-Q100	Hex inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4	17	-40 to 125	•	•	•		
74HC132-Q100	Quad 2-input NAND gate Schmitt-trigger	2.0 - 6.0	± 5.2	11	-40 to 125	•	•	•		
74HCT132-Q100	Quad 2-input NAND gate Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4	17	-40 to 125	•	•	•		
74HC7541-Q100	Octal buffer/line driver Schmitt-trigger (3-State)	2.0 - 6.0	± 7.8	11	-40 to 125				•	•
74HCT7541-Q100	Octal buffer/line driver Schmitt-trigger; TTL-enabled (3-State)	4.5 - 5.5	± 6	16	-40 to 125				•	•
74LV132-Q100	Quad 2-input NAND gate Schmitt-trigger	1.0 - 5.5	± 12	10	-40 to 125	•	•	•		
74LVC14A-Q100	Hex inverter Schmitt-trigger	1.2 - 3.6	± 24	3.2	-40 to 125	•	•	•		
74LVC132A-Q100	Quad 2-input NAND gate Schmitt-trigger	1.2 - 3.6	± 24	3.4	-40 to 125	•	•	•		
HEF40106B-Q100	Hex inverter Schmitt-trigger	4.5 - 15.5	± 2.4	30	-40 to 85	•	•			

## Shift registers

Type number	Description	Features				Package (suffix)							
		V <sub>cc</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)	SOT163-1 (D)	SOT360-1 (PW)
74AHC164-Q100	8-bit serial-in/parallel-out shift register	2.0 - 5.5	± 8	4.5	-40 to 125	•	•	•					
74AHCT164-Q100	8-bit serial-in/parallel-out shift register; TTL-enabled	4.5 - 5.5	± 8	3.4	-40 to 125	•	•	•					
74AHC594-Q100	8-bit serial-in/parallel-out shift register with output register	2.0 - 5.5	± 8	4.1	-40 to 125				•	•	•		
74AHCT594-Q100	8-bit serial-in/parallel-out shift register with output register; TTL-enabled	4.5 - 5.5	± 8	3.8	-40 to 125				•	•	•		
74AHC595-Q100	8-bit serial-in/parallel-out shift register with output register (3-state)	2.0 - 5.5	± 8	4.0	-40 to 125				•	•	•		
74AHCT595-Q100	8-bit serial-in/parallel-out shift register with output storage; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.8	-40 to 125				•	•	•		
74HC164-Q100	8-bit serial-in/parallel-out shift register	2.0 - 6.0	± 5.2	12	-40 to 125	•	•	•					
74HCT164-Q100	8-bit serial-in/parallel-out shift register; TTL-enabled	4.5 - 5.5	± 4	12	-40 to 125	•	•	•					
74HC165-Q100	8-bit parallel or serial-in/serial-out shift register	2.0 - 6.0	± 5.2	16	-40 to 125				•	•	•		
74HCT165-Q100	8-bit parallel or serial-in/serial-out shift register; TTL-enabled	4.5 - 5.5	± 4	14	-40 to 125				•	•	•		
74HC166-Q100	8-bit parallel or serial-in/serial-out shift register	2.0 - 6.0	± 5.2	15	-40 to 125				•	•			
74HCT166-Q100	8-bit parallel or serial-in/serial-out shift register; TTL-enabled	4.5 - 5.5	± 4	23	-40 to 125				•				
74HC594-Q100	8-bit serial-in/parallel-out shift register with output storage register	2.0 - 6.0	± 7.8	14	-40 to 125			•					
74HCT594-Q100	8-bit serial-in/parallel-out shift register with output storage register; TTL-enabled	4.5 - 5.5	± 6	15	-40 to 125				•				
74HC595-Q100	8-bit serial-in/parallel-out shift register with output storage register (3-state)	2.0 - 6.0	± 7.8	16	-40 to 125				•	•	•		
74HCT595-Q100	8-bit serial-in/parallel-out shift register with output storage register; TTL-enabled (3-state)	4.5 - 5.5	± 6	25	-40 to 125				•	•	•		
74HC597-Q100	8-bit parallel or serial-in/parallel-out shift register with parallel input register	2.0 - 6.0	± 5.2	16	-40 to 125				•	•			
74HCT597-Q100	8-bit parallel or serial-in/parallel-out shift register with parallel input register; TTL-enabled	4.5 - 5.5	± 4	20	-40 to 125				•				
74HC4094-Q100	8-bit serial-in/serial or parallel-out shift register with output register (3-state)	2.0 - 6.0	± 5.2	15	-40 to 125				•	•			
74HCT4094-Q100	8-bit serial-in/serial or parallel-out shift register with output register; TTL-enabled (3-state)	4.5 - 5.5	± 4	19	-40 to 125				•				
74LV164-Q100	8-bit serial-in/parallel-out shift register	1.0 - 5.5	± 12	12	-40 to 125	•	•	•					
74LV165-Q100	8-bit parallel or serial-in/serial-out shift register	1.0 - 5.5	± 12	18	-40 to 125				•	•			

## Shift registers

Type number	Description	Features				Package (suffix)							
		V <sub>cc</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT108-1 (D)	SOT402-1 (PW)	SOT762-1 (BQ)	SOT109-1 (D)	SOT403-1 (PW)	SOT763-1 (BQ)	SOT163-1 (D)	SOT360-1 (PW)
74LV165A-Q100	8-bit parallel or serial-in/serial-out shift register	1.0 - 5.5	± 12	7.5	-40 to 125				•	•			
74LV4060-Q100	14-stage binary ripple counter with oscillator	1.0 - 5.5	± 6	29	-40 to 125				•	•			
74LVC594A-Q100	8-bit serial-in/parallel-out shift register with output storage register	1.2 - 5.5	± 24	3.1	-40 to 125				•	•	•		
74VHC595-Q100	8-bit serial-in/parallel-out shift register with output storage register (3-state)	2.0 - 5.5	± 8	4.0	-40 to 125				•	•	•		
74VHCT595-Q100	8-bit serial-in/parallel-out shift register with output storage register; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.8	-40 to 125				•	•	•		
HEF4014B-Q100	8-bit shift register with synchronous parallel enable	3.0 - 15	± 2.4	40	-40 to 85				•				
HEF4021B-Q100	8-bit shift register with asynchronous parallel load	3.0 - 15	± 2.4	40	-40 to 85				•	•			
HEF4094B-Q100	8-bit serial-in/serial or parallel-out shift register with output register (3-state)	3.0 - 15	± 2.4	50	-40 to 85				•	•			
HEF4794B-Q100	8-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	3.0 - 15	-20	45	-40 to 85				•				
HEF4894B-Q100	12-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	3.0 - 15	-20	45	-40 to 85							•	•
NPIC6C595-Q100	8-bit serial-in/parallel-out shift register with output storage register (3-state)	4.5 - 5.5	-100	90	-40 to 125				•	•	•		
NPIC6C596-Q100	8-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	4.5 - 5.5	-100	90	-40 to 125				•	•	•		
NPIC6C596A-Q100	8-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	2.3 - 5.5	-100	90	-40 to 125				•	•	•		
NPIC6C4894-Q100	12-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	4.5 - 5.5	-100	105	-40 to 125							•	•

## Transceivers

Types in **bold** represent new products

Type number	Description	Features				Package (suffix)				
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>prop</sub> (ns)	T <sub>amb</sub> (°C)	SOT163-1 (D)	SOT360-1 (PW)	SOT764-1 (BQ)	SOT362-1 (DGG)	SOT480-1 (DGV)
74AHC245-Q100	Octal transceiver (3-state)	2.0 - 5.5	± 8	3.5	-40 to 125	•	•	•		
74AHCT245-Q100	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	± 8	5.0	-40 to 125	•	•	•		
74AVC16245-Q100	16-bit transceiver (3-state)	1.2 - 3.6	± 12	2.0	-40 to 85				•	
74HC245-Q100	Octal transceiver (3-state)	2.0 - 6.0	± 7.8	7.0	-40 to 125	•	•	•		
74HCT245-Q100	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	± 6	10	-40 to 125	•	•	•		
74LVC245A-Q100	Octal transceiver (3-state)	1.2 - 3.6	± 24	2.9	-40 to 125	•	•	•		
74LVCH245A-Q100	Octal transceiver with bus hold (3-state)	1.2 - 3.6	± 24	2.9	-40 to 125	•	•	•		
<b>74LVC16245A-Q100</b>	16-bit bus transceiver with diRection pin; 5 V tolerant (3-state)	1.3 - 3.6	± 24	5.2	-40 to 125				•	•
74LVC162245A-Q100	16-bit transceiver with 30 Ω termination resistors (3-state)	1.2 - 3.6	± 12	3.3	-40 to 125				•	•
<b>74LVCH16245A-Q100</b>	16-bit bus transceiver with bus hold with diRection pin; 5 V tolerant (3-state)	1.3 - 3.6	± 24	5.2	-40 to 125				•	•

# Q100 mini logic functions and packages

## Analog switches

Types in **bold** represent new products

Type number	Description	Features					Package (suffix)						
		Configuration	V <sub>CC</sub> (V)	R <sub>ON</sub> (Ω)	R <sub>ON</sub> (FLAT) (Ω)	T <sub>amb</sub> (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT552-1 (DP)
74AHC1G66-Q100	Single-pole, single-throw analog switch	SPST-NO	2.0 - 5.5	40	5	-40 to 125	•	•					
74AHC1G66-Q100	Single-pole, single-throw analog switch; TTL-enabled	SPST-NO	4.5 - 5.5	40	5	-40 to 125	•	•					
74HC1G66-Q100	Single-pole, single-throw analog switch	SPST-NO	2.0 - 9.0	105	23	-40 to 125	•	•					
74HCT1G66-Q100	Single-pole, single-throw analog switch; TTL-enabled	SPST-NO	4.5 - 5.5	118	23	-40 to 125	•	•					
74HC2G66-Q100	Dual single-pole, single-throw analog switch	SPST-NO	2.0 - 9.0	105	23	-40 to 125					•	•	
74HCT2G66-Q100	Dual single-pole, single-throw analog switch; TTL-enabled	SPST-NO	4.5 - 5.5	118	23	-40 to 125					•	•	
74LVC1G53-Q100	Single-pole, double-throw analog switch	SPDT-Z	1.65 - 5.5	15	1.5	-40 to 125					•	•	
74LVC1G66-Q100	Single-pole, single-throw analog switch	SPST-NO	1.65 - 5.5	15	1.5	-40 to 125	•	•					
74LVC1G384-Q100	Single-pole, single-throw analog switch	SPST-NC	1.65 - 5.5	15	1.5	-40 to 125	•	•					
74LVC1G3157-Q100	Single-pole, double-throw analog switch	SPDT	1.65 - 5.5	15	1.5	-40 to 125			•	•			
<b>74LVC2G3157-Q100</b>	Dual 10 Ω single-pole double-throw analog switch	SPDT	1.65 - 5.5	15	1.5	-40 to 125							•
74LVC2G66-Q100	Dual single-pole, single-throw analog switch	SPST-NO	1.65 - 5.5	15	1.5	-40 to 125					•	•	

## Bus switches

Type number	Description	Features				Package (suffix)	
		V <sub>CC</sub> (V)	V <sub>PASS</sub> (V)	R <sub>ON</sub> (Ω)	T <sub>amb</sub> (°C)	SOT96-1 (D)	SOT530-1 (PW)
CBT3306-Q100	Dual bus switch	4.5 - 5.5	3.9	7	-40 to 85	•	•

## Counters/frequency dividers

Types in **bold** represent new products

Type number	Description	Features				Package (suffix)	
		V <sub>CC</sub> (V)	Output drive capability (mA)	Logic switching levels	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT353-1 (GW)
<b>74AHC1G4208-Q100</b>	08-stage divider and oscillator	2.0 - 5.5	±5.2	CMOS	14	-40 to 125	•
<b>74AHC1G4210-Q100</b>	10-stage divider and oscillator	2.0 - 5.5	±8	CMOS	14	-40 to 125	•
<b>74AHC1G4212-Q100</b>	12-stage divider and oscillator	2.0 - 5.5	±8	CMOS	20	-40 to 125	•
<b>74AHC1G4214-Q100</b>	14-stage divider and oscillator	2.0 - 5.5	±8	CMOS	23	-40 to 125	•
<b>74AHC1G4215-Q100</b>	15-stage divider and oscillator	2.0 - 5.5	±8	CMOS	24	-40 to 125	•

## Buffers/Inverters

Types in **bold** represent new products

Type number	Description	Features				Package (suffix)							
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>prop</sub> (ns)	T <sub>amb</sub> (°C)	SOT353-1 (GM)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT886 (GM)	SOT1202 (GS)
74AHC1GU04-Q100	Single inverter; unbuffered	2.0 - 5.5	± 8	2.6	-40 to 125	•	•						
74AHC3GU04-Q100	Triple inverter; unbuffered	2.0 - 5.5	± 8	2.5	-40 to 125					•	•		
74AHC1G04-Q100	Single inverter	2.0 - 5.5	± 8	3.1	-40 to 125	•	•						
74AHC1G04-Q100	Single inverter; TTL-enabled	4.5 - 5.5	± 8	3.4	-40 to 125	•	•						
74AHC1G07-Q100	Single buffer; open-drain	2.0 - 5.5	8	4.2	-40 to 125	•	•						
74AHC1G17-Q100	Single buffer with Schmitt-trigger inputs	2.0 - 5.5	± 8	3.2	-40 to 125	•							
74AHC1G17-Q100	Single buffer with Schmitt-trigger inputs; TTL-enabled	4.5 - 5.5	± 8	4.1	-40 to 125	•							
74AHC1G125-Q100	Single buffer/line driver (3-state)	2.0 - 5.5	± 8	3.4	-40 to 125	•	•						
74AHC1G125-Q100	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.4	-40 to 125	•	•						
74AHC1G126-Q100	Single buffer/line driver (3-state)	2.0 - 5.5	± 8	3.4	-40 to 125	•	•						
74AHC1G126-Q100	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.4	-40 to 125	•	•						
74AHC2G125-Q100	Dual buffer/line driver (3-state)	2.0 - 5.5	± 8	3.4	-40 to 125					•	•		
74AHC2G125-Q100	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.4	-40 to 125					•	•		
74AHC2G126-Q100	Dual buffer/line driver (3-state)	2.0 - 5.5	± 8	3.4	-40 to 125					•	•		
74AHC2G126-Q100	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.4	-40 to 125					•	•		
74AHC2G241-Q100	Dual buffer/line driver (3-state)	2.0 - 5.5	± 8	3.4	-40 to 125					•	•		
74AHC2G241-Q100	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 8	3.4	-40 to 125					•	•		
74AHC3G04-Q100	Triple inverter	2.0 - 5.5	± 8	3.1	-40 to 125					•	•		
74AHC3G04-Q100	Triple inverter; TTL-enabled	4.5 - 5.5	± 8	3.0	-40 to 125					•	•		
74AUP1G04-Q100	Single inverter	1.1 - 3.6	± 1.9	4.0	-40 to 125	•	•						
74AUP1G06-Q100	Single inverter; open-drain	1.1 - 3.6	1.9	4.5	-40 to 125	•							
<b>74AUP1G07-Q100</b>	Buffer; open-drain	0.8 - 3.6	1.9	4.5	-40 to 125	•							
74AUP1G34-Q100	Single buffer	1.1 - 3.6	± 1.9	3.9	-40 to 125	•							
74AUP1G125-Q100	Single buffer/line driver (3-state)	1.1 - 3.6	± 1.9	4.3	-40 to 125	•						•	•
74AUP2G04-Q100	Dual inverter	1.1 - 3.6	± 1.9	4.0	-40 to 125			•					
74AUP2GU04-Q100	Dual inverter; unbuffered	1.1 - 3.6	± 1.9	2.3	-40 to 125			•				•	
74HC1GU04-Q100	Single inverter; unbuffered	2.0 - 6.0	± 2.6	5.0	-40 to 125	•	•						
74HC2GU04-Q100	Dual inverter; unbuffered	2.0 - 6.0	± 5.2	5.0	-40 to 125			•	•				
74HC3GU04-Q100	Triple inverter; unbuffered	2.0 - 6.0	± 5.2	6.0	-40 to 125					•	•		
74HC1G04-Q100	Single inverter	2.0 - 6.0	± 2.6	7.0	-40 to 125	•	•						
74HCT1G04-Q100	Single inverter; TTL-enabled	4.5 - 5.5	± 2.0	8.0	-40 to 125	•	•						
74HC1G125-Q100	Single buffer/line driver (3-state)	2.0 - 6.0	± 2.6	9.0	-40 to 125	•	•						



## Buffers/Inverters

Type number	Description	Features				Package (suffix)							
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT886 (GM)	SOT1202 (GS)
74HCT1G125-Q100	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 2.0	10	-40 to 125	•	•						
74HC2G04-Q100	Dual inverter	2.0 - 6.0	± 5.2	8.0	-40 to 125			•	•				
74HCT2G04-Q100	Dual inverter; TTL-enabled	4.5 - 5.5	± 4.0	10	-40 to 125			•	•				
74HC2G34-Q100	Dual buffer	2.0 - 6.0	± 5.2	9.0	-40 to 125			•	•				
74HCT2G34-Q100	Dual buffer; TTL-enabled	4.5 - 5.5	± 4.0	10	-40 to 125			•	•				
74HC2G125-Q100	Dual buffer/line driver (3-state)	2.0 - 6.0	± 5.2	10	-40 to 125					•	•		
74HCT2G125-Q100	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	± 4.0	12	-40 to 125					•	•		
74HC3G04-Q100	Triple inverter	2.0 - 6.0	± 5.2	8.0	-40 to 125					•	•		
74HCT3G04-Q100	Triple inverter; TTL-enabled	4.5 - 5.5	± 4.0	10	-40 to 125					•	•		
74HC3G07-Q100	Triple buffer; open-drain	2.0 - 6.0	5.2	9.0	-40 to 125					•	•		
74HCT3G07-Q100	Triple buffer; open-drain; TTL-enabled	4.5 - 5.5	4	9.0	-40 to 125					•	•		
74HC3G34-Q100	Triple buffer	2.0 - 6.0	± 5.2	9.0	-40 to 125					•	•		
74HCT3G34-Q100	Triple buffer; TTL-enabled	4.5 - 5.5	± 4.0	10	-40 to 125						•		
74LVC1G04-Q100	Single inverter	1.65 - 5.5	± 32	2.0	-40 to 125	•	•						
74LVC1G06-Q100	Single inverter; open-drain	1.65 - 5.5	32	2.3	-40 to 125	•	•						
74LVC1G07-Q100	Single buffer; open-drain	1.65 - 5.5	32	2.2	-40 to 125	•	•						•
74LVC1G34-Q100	Single buffer	1.65 - 5.5	± 32	2.0	-40 to 125	•	•						
74LVC1G125-Q100	Single buffer/line driver (3-state)	1.65 - 5.5	± 32	2.1	-40 to 125	•	•						•
74LVC1G126-Q100	Single buffer/line driver (3-state)	1.65 - 5.5	± 32	2.0	-40 to 125	•	•						
74LVC1GU04-Q100	Single inverter; unbuffered	1.65 - 5.5	± 32	1.6	-40 to 125	•	•						
74LVC2G04-Q100	Dual inverter	1.65 - 5.5	± 32	2.7	-40 to 125			•	•				•
74LVC2G06-Q100	Dual inverter; open-drain	1.65 - 5.5	32	2.3	-40 to 125			•	•				
74LVC2G07-Q100	Dual buffer; open-drain	1.65 - 5.5	32	2.6	-40 to 125			•	•				
74LVC2G125-Q100	Dual buffer/line driver (3-state)	1.65 - 5.5	± 32	2.3	-40 to 125					•	•		
74LVC2G126-Q100	Dual buffer/line driver (3-state)	1.65 - 5.5	± 32	2.4	-40 to 125					•	•		
74LVC2G240-Q100	Dual inverter/line driver (3-state)	1.65 - 5.5	± 32	2.5	-40 to 125					•	•		
74LVC2G241-Q100	Dual buffer/line driver (3-state)	1.65 - 5.5	± 32	2.6	-40 to 125					•	•		
74LVC2GU04-Q100	Dual inverter; unbuffered	1.65 - 5.5	± 32	2.3	-40 to 125			•	•				
74LVC3G04-Q100	Triple inverter	1.65 - 5.5	± 32	2.7	-40 to 125					•	•		
74LVC3G07-Q100	Triple buffer; open-drain	1.65 - 5.5	32	2.1	-40 to 125					•	•		
74LVC3G34-Q100	Triple buffer	1.65 - 5.5	± 32	2.2	-40 to 125					•	•		

## Digital decoders/Demultiplexers

Type number	Description	Features				Package (suffix)	
		V <sub>CC</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT363 (GW)	SOT457 (GV)
74LVC1G18-Q100	1-to-2 demultiplexer (3-state)	1.65 - 5.5	± 32	2.3	-40 to 125	•	•
74LVC1G19-Q100	1-to-2 demultiplexer	1.65 - 5.5	± 32	1.8	-40 to 125	•	

## Digital multiplexers

Types in **bold** represent new products

Type number	Description	Features				Package (suffix)		
		V <sub>CC</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT363 (GW)	SOT457 (GV)	SOT886 (GM)
<b>74AUP1G157-Q100</b>	Single 2-input multiplexer	1.1 - 3.6	± 1.9	3.2	-40 to 125			•
74LVC1G157-Q100	Single 2-input multiplexer	1.65 - 5.5	± 32	2.2	-40 to 125	•	•	

## Flip-flops

Type number	Description	Features				Package (suffix)					
		V <sub>CC</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)
74AHC1G79-Q100	Single D-type flip-flop; positive-edge trigger	2.0 - 5.5	± 8	3.5	-40 to 125	•	•				
74AHC1G79-Q100	Single D-type flip-flop; positive-edge trigger; TTL-enabled	4.5 - 5.5	± 8	3.5	-40 to 125	•	•				
74AUP1G74-Q100	Single D-type flip-flop with set and reset; positive-edge trigger	1.1 - 3.6	± 1.9	8.1	-40 to 125						•
74AUP1G175-Q100	Single D flip-flop with reset; positive-edge trigger	1.1 - 3.6	± 1.9	7.4	-40 to 125			•			
74AUP1G374-Q100	Single D-type flip-flop; positive-edge trigger (3-state)	1.1 - 3.6	± 1.9	7.9	-40 to 125			•			
74AUP2G79-Q100	Dual D-type flip-flop; positive-edge trigger	1.1 - 3.6	± 1.9	8.5	-40 to 125						•
74LVC1G74-Q100	Single D-type flip-flop with set and reset; positive-edge trigger	1.65 - 5.5	± 32	3.5	-40 to 125					•	•
74LVC1G79-Q100	Single D-type flip-flop; positive-edge trigger	1.65 - 5.5	± 32	2.2	-40 to 125	•	•				
74LVC1G80-Q100	Single D-type flip-flop; positive-edge trigger	1.65 - 5.5	± 32	2.4	-40 to 125	•	•				
74LVC1G175-Q100	Single D flip-flop with reset; positive-edge trigger	1.65 - 5.5	± 32	3.1	-40 to 125			•	•		
74LVC2G74-Q100	Single D-type flip-flop with set and reset; positive-edge trigger	1.65 - 5.5	± 32	3.5	-40 to 125					•	•

## Gates

Types in **bold** represent new products

Type number	Description	Features				Package (suffix)							
		V <sub>cc</sub> (V)	I <sub>o</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT886 (GM)	SOT1203 (GS)
74AHC1G09-Q100	Single 2-input AND gate; open-drain	2.0 - 5.5	± 8	3.2	-40 to 125	•	•						
74AHC1G00-Q100	Single 2-input NAND gate	2.0 - 5.5	± 8	3.5	-40 to 125	•	•						
74AHC1G00-Q100	Single 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 8	3.6	-40 to 125	•	•						
74AHC1G02-Q100	Single 2-input NOR gate	2.0 - 5.5	± 8	3.2	-40 to 125	•	•						
74AHC1G02-Q100	Single 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 8	3.5	-40 to 125	•	•						
74AHC1G08-Q100	Single 2-input AND gate	2.0 - 5.5	± 8	3.2	-40 to 125	•	•						
74AHC1G08-Q100	Single 2-input AND gate; TTL-enabled	4.5 - 5.5	± 8	3.6	-40 to 125	•	•						
74AHC1G32-Q100	Single 2-input OR gate	2.0 - 5.5	± 8	3.2	-40 to 125	•	•						
74AHC1G32-Q100	Single 2-input OR gate; TTL-enabled	4.5 - 5.5	± 8	3.3	-40 to 125	•	•						
74AHC1G86-Q100	2-input EXCLUSIVE-OR gate	2.0 - 5.5	± 8	3.4	-40 to 125	•	•						
74AHC1G86-Q100	2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	± 8	3.5	-40 to 125	•	•						
74AHC2G00-Q100	Dual 2-input NAND gate	2.0 - 5.5	± 8	3.5	-40 to 125					•	•		
74AHC2G00-Q100	Dual 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 8	3.6	-40 to 125					•	•		
74AHC2G08-Q100	Dual 2-input AND gate	2.0 - 5.5	± 8	3.2	-40 to 125					•	•		
74AHC2G08-Q100	Dual 2-input AND gate; TTL-enabled	4.5 - 5.5	± 8	3.6	-40 to 125					•	•		
74AHC2G32-Q100	Dual 2-input OR gate	2.0 - 5.5	± 8	3.2	-40 to 125					•	•		
74AHC2G32-Q100	Dual 2-input OR gate; TTL-enabled	4.5 - 5.5	± 8	3.3	-40 to 125					•	•		
<b>74AUP1G00-Q100</b>	Single 2-input NAND gate	1.1 - 3.6	± 1.9	8.3	-40 to 125	•							
74AUP1G02-Q100	Single 2-input NOR gate	1.1 - 3.6	± 1.9	8.2	-40 to 125	•							
74AUP1G08-Q100	Single 2-input AND gate	1.1 - 3.6	± 1.9	8.2	-40 to 125	•						•	
<b>74AUP1G09-Q100</b>	Single 2-input AND gate; open-drain	2.0 - 5.5	± 8	3.2	-40 to 125	•							
74AUP1G32-Q100	Single 2-input OR gate	1.1 - 3.6	± 1.9	7.9	-40 to 125	•						•	
74AUP1G86-Q100	Single 2-input EXCLUSIVE-OR gate	1.1 - 3.6	± 1.9	3.3	-40 to 125	•							
74AUP1T98-Q100	Configurable gate with voltage level translation	2.3 - 3.6 V	± 1.9	8.7	-40 to 125			•					
74HC1G86-Q100	Single 2-input EXCLUSIVE-OR gate	2.0 - 6.0	± 2.6	9.0	-40 to 125	•	•						
74HC1G00-Q100	Single 2-input NAND gate	2.0 - 6.0	± 2.6	7.0	-40 to 125	•							
74HCT1G00-Q100	Single 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 2	10	-40 to 125	•	•						
74HC1G02-Q100	Single 2-input NOR gate	2.0 - 6.0	± 2.6	7.0	-40 to 125	•	•						
74HCT1G02-Q100	Single 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 2.0	9.0	-40 to 125	•	•						
74HC1G08-Q100	Single 2-input AND gate	2.0 - 6.0	± 5.2	7.0	-40 to 125	•	•						
74HCT1G08-Q100	Single 2-input AND gate; TTL-enabled	4.5 - 5.5	± 2	11	-40 to 125	•	•						
74HC1G32-Q100	Single 2-input OR gate	2.0 - 6.0	± 2.6	8.0	-40 to 125	•	•						
74HCT1G32-Q100	Single 2-input OR gate; TTL-enabled	4.5 - 5.5	± 2.0	10	-40 to 125	•	•						
74HC2G00-Q100	Dual 2-input NAND gate	2.0 - 6.0	± 5.6	9.0	-40 to 125					•	•		
74HCT2G00-Q100	Dual 2-input NAND gate; TTL-enabled	4.5 - 5.5	± 4	12	-40 to 125					•	•		
74HC2G02-Q100	Dual 2-input NOR gate	2.0 - 6.0	± 5.2	9.0	-40 to 125					•	•		

## Gates

Types in **bold** represent new products

Type number	Description	Features				Package (suffix)							
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT886 (GM)	SOT1203 (GS)
74HCT2G02-Q100	Dual 2-input NOR gate; TTL-enabled	4.5 - 5.5	± 4	12	-40 to 125					•	•		
74HC2G08-Q100	Dual 2-input AND gate	2.0 - 6.0	± 5.2	9.0	-40 to 125					•	•		
74HCT2G08-Q100	Dual 2-Input AND gate; TTL-enabled	4.5 - 5.5	± 4	14	-40 to 125					•	•		
74HC2G32-Q100	Dual 2-input OR gate	2.0 - 6.0	± 5.2	9.0	-40 to 125					•	•		
74HCT2G32-Q100	Dual 2-input OR gate; TTL-enabled	4.5 - 5.5	± 4.0	13	-40 to 125					•	•		
74HC2G86-Q100	Dual 2-input EXCLUSIVE-OR gate	2.0 - 6.0	± 5.2	9.0	-40 to 125					•	•		
74HCT2G86-Q100	Dual 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	± 4.0	11	-40 to 125					•	•		
74HCT1G86-Q100	Single 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	± 2.0	10	-40 to 125	•	•						
74LVC1G00-Q100	Single 2-input NAND gate	1.65 - 5.5	± 32	2.2	-40 to 125	•	•						
74LVC1G02-Q100	Single 2-input NOR gate	1.65 - 5.5	± 32	2.1	-40 to 125	•	•						
74LVC1G08-Q100	Single 2-input AND gate	1.65 - 5.5	± 32	2.1	-40 to 125	•	•						
74LVC1G10-Q100	Single 3-input NAND gate	1.65 - 5.5	± 32	2.6	-40 to 125			•					
74LVC1G11-Q100	Single 3-input AND gate	1.65 - 5.5	± 32	2.6	-40 to 125			•	•				
<b>74LVC1G27-Q100</b>	Single 3-input NOR gate	1.65 - 5.5	± 32	2.6	-40 to 125			•					
74LVC1G32-Q100	Single 2-input OR gate	1.65 - 5.5	± 32	2.1	-40 to 125	•	•						
74LVC1G38-Q100	Single 2-input NAND gate; open-drain	1.65 - 5.5	32	2.3	-40 to 125	•	•						
74LVC1G57-Q100	Configurable gate; Schmitt-trigger	1.65 - 5.5	± 32	3.8	-40 to 125			•	•				
74LVC1G58-Q100	Configurable gate; Schmitt-trigger	1.65 - 5.5	± 32	3.8	-40 to 125			•	•				
74LVC1G86-Q100	Single 2-input EXCLUSIVE-OR gate	1.65 - 5.5	± 32	2.4	-40 to 125	•	•						
<b>74LVC1G97-Q100</b>	Configurable gate; Schmitt-trigger	1.65 - 5.5	± 32	6.3	-40 to 125			•					
74LVC1G332-Q100	Single 3-input OR gate	1.65 - 5.5	± 32	2.6	-40 to 125			•	•				
74LVC1GX04-Q100	Crystal driver	1.65 - 5.5	± 24	2.8	-40 to 125			•	•				
74LVC2G00-Q100	Dual 2-input NAND gate	1.65 - 5.5	± 32	2.2	-40 to 125						•		
74LVC2G02-Q100	Dual 2-input NOR gate	1.65 - 5.5	± 32	2.4	-40 to 125					•	•		
74LVC2G08-Q100	Dual 2-input AND gate	1.65 - 5.5	± 24	2.1	-40 to 125					•	•		•
74LVC2G32-Q100	Dual 2-input OR gate	1.65 - 5.5	± 32	2.2	-40 to 125					•	•		
74LVC2G34-Q100	Dual buffer	1.65 - 5.5	± 32	2.2	-40 to 125			•	•				
74LVC2G86-Q100	Dual 2-input EXCLUSIVE-OR gate	1.65 - 5.5	± 32	2.3	-40 to 125					•	•		

## Latches/Registered drivers

Type number	Description	Features				Package (suffix)
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT363 (GW)
74AUP1G373-Q100	Single D-type transparent latch (3-state)	1.1 - 3.6	±1.9	8.5	-40 to 125	•

## Multivibrators

Type number	Description	Features				Package (suffix)	
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT505-2 (DP)	SOT765-1 (DC)
74LVC1G123-Q100	Single retriggerable monostable multivibrator	1.65 - 5.5	± 32	3.5	-40 to 125	•	•

## Schmitt-triggers

Types in **bold** represent new products

Type number	Description	Features				Package (suffix)						
		V <sub>CC</sub> (V)	I <sub>O</sub> (mA)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)	SOT353-1 (GW)	SOT753 (GV)	SOT363 (GW)	SOT457 (GV)	SOT505-2 (DP)	SOT765-1 (DC)	SOT886 (GM)
74AHC1G14-Q100	Single inverter Schmitt-trigger	2.0 - 5.5	± 8	3.2	-40 to 125	•	•					
74AHC1G14-Q100	Single inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 8	4.1	-40 to 125	•	•					
74AHC3G14-Q100	Triple inverter Schmitt-trigger	2.0 - 5.5	± 8	3.2	-40 to 125					•	•	
74AHC3G14-Q100	Triple inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 8	4.1	-40 to 125					•	•	
<b>74AUP1G132-Q100</b>	Single 2-input NAND gate; Schmitt-trigger	1.1 - 3.6	± 1.9	10	-40 to 125	•						
74HC1G14-Q100	Single inverter Schmitt-trigger	2.0 - 6.0	± 2.6	10	-40 to 125	•	•					
74HCT1G14-Q100	Single inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 2.0	15	-40 to 125	•	•					
74HC2G14-Q100	Dual inverter Schmitt-trigger	2.0 - 6.0	± 5.2	16	-40 to 125			•	•			
74HCT2G14-Q100	Dual inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4.0	21	-40 to 125			•	•			
74HC2G17-Q100	Dual buffer Schmitt-trigger	2.0 - 6.0	± 5.2	12	-40 to 125			•	•			
74HCT2G17-Q100	Dual buffer Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4.0	21	-40 to 125			•	•			
74HC3G14-Q100	Triple inverter Schmitt-trigger	2.0 - 6.0	± 5.2	16	-40 to 125					•	•	
74HCT3G14-Q100	Triple inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	± 4.0	21	-40 to 125					•	•	
74LVC1G14-Q100	Single inverter Schmitt-trigger	1.65 - 5.5	± 32	3.0	-40 to 125	•	•					•
74LVC1G17-Q100	Single buffer Schmitt-trigger	1.65 - 5.5	± 32	3.0	-40 to 125	•	•					•
74LVC2G14-Q100	Dual inverter Schmitt-trigger	1.65 - 5.5	± 32	3.9	-40 to 125			•	•			•
74LVC2G17-Q100	Dual buffer Schmitt-trigger	1.65 - 5.5	± 32	3.6	-40 to 125			•	•			
74LVC3G17-Q100	Triple buffer Schmitt-trigger	1.65 - 5.5	± 32	3.6	-40 to 125					•	•	

## Level shifters/Translators

Types in **bold** represent new products

Type number	Description	Features				Package (suffix)									
		V <sub>cc</sub> (A) (V)	V <sub>cc</sub> (B) (V)	I <sub>o</sub> (mA)	T <sub>amb</sub> (°C)	SOT353-1 (GW)	SOT363 (GW)	SOT505-2 (DP)	SOT765-1 (DC)	SOT552-1 (DP)	SOT833-1 (GT)	SOT886 (GM)	SOT1202 (GS)	SOT1203 (GS)	SOT1160-1 (GU)
74AUP1T34-Q100	Single dual supply translating buffer	1.1 - 3.6	1.1 - 3.6	± 1.9	-40 to 125	•									
74AVC1T45-Q100	Single dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125		•						•		
74AVC2T45-Q100	Dual-bit dual-supply voltage level translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125			•	•		•				
<b>74AVC2T245-Q100</b>	2-bit dual supply configurable translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125										•
74AVCH1T45-Q100	Single dual-supply voltage translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	± 12	-40 to 125		•								
74AXP1T57-Q100	Dual-supply translating configurable multiple function gate, Schmitt-trigger inputs	0.7 - 2.75	1.2 - 5.5	± 12	-40 to 125				•						
74AXP2T08-Q100	Dual-supply 2-input AND gate	0.7 - 2.75	1.2 - 5.5	± 12	-40 to 125					•					
74LVC1T45-Q100	Single dual-supply voltage level translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40 to 125		•					•			
74LVCH1T45-Q100	Single dual-supply voltage translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40 to 125		•								
74LVC2T45-Q100	Dual-bit dual-supply voltage level translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40 to 125				•		•			•	
74LVCH2T45-Q100	Dual-bit dual-supply voltage level translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	± 24	-40 to 125				•						

## Buffers/Inverters/Drivers

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load CL (pF)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74ABT04	Hex inverter	4.5 - 5.5	TTL	-15 / 20	50	2.2	100	-40 to 85
74ABT125	Quad buffer/line driver (3-state)	4.5 - 5.5	TTL	-32 / 64	50	3.1	100	-40 to 85
74ABT126	Quad buffer/line driver (3-state)	4.5 - 5.5	TTL	-32 / 64	50	3.0	100	-40 to 85
74ABT162244	16-bit buffer/line driver with 30 Ohm termination resistors (3-state)	4.5 - 5.5	TTL	-32 / 12	50	3.2	100	-40 to 85
74ABT16240A	16-bit inverter/line driver (3-state)	4.5 - 5.5	TTL	-32 / 64	50	2.0	150	-40 to 85
74ABT16244A	16-bit buffer/line driver (3-state)	4.5 - 5.5	TTL	-32 / 64	50	2.1	150	-40 to 85
74ABT244	Octal buffer/line driver (3-state)	4.5 - 5.5	TTL	-32 / 64	50	2.9	100	-40 to 85
74AHC04	Hex inverter	2.0 - 5.5	CMOS	±8	50	3.0	60	-40 to 125
74AHC125	Quad buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.0	60	-40 to 125
74AHC126	Quad buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.3	60	-40 to 125
74AHC14	Hex inverter; Schmitt-trigger	2.0 - 5.5	CMOS	±8	50	3.2	60	-40 to 125
74AHC1G04	Single inverter	2.0 - 5.5	CMOS	±8	50	3.1	60	-40 to 125
74AHC1G125	Single buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.4	60	-40 to 125
74AHC1G126	Single buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.4	60	-40 to 125
74AHC1G14	Single inverter; Schmitt-trigger	2.0 - 5.5	CMOS	±8	50	3.2	60	-40 to 125
74AHC1G17	Single buffer with Schmitt-trigger inputs	2.0 - 5.5	CMOS	±8	50	3.2	60	-40 to 125
74AHC1GU04	Single inverter; unbuffered	2.0 - 5.5	CMOS	±8	50	2.6	60	-40 to 125
74AHC244	Octal buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.5	60	-40 to 125
74AHC2G125	Dual buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.4	60	-40 to 125
74AHC2G126	Dual buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.4	60	-40 to 125
74AHC2G241	Dual buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.4	60	-40 to 125
74AHC3G04	Triple inverter	2.0 - 5.5	CMOS	±8	50	3.1	60	-40 to 125
74AHC3G14	Triple inverter; Schmitt-trigger	2.0 - 5.5	CMOS	±8	50	3.2	60	-40 to 125
74AHC3GU04	Triple inverter; unbuffered	2.0 - 5.5	CMOS	±8	50	2.5	60	-40 to 125
74AHC541	Octal buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.5	60	-40 to 125
74AHC9541A	Octal buffer/line driver; Schmitt-trigger (3-state)	1.8 - 5.5	CMOS	±8	15	3.4	60	-40 to 125
74AHCT04	Hex inverter; TTL-enabled	4.5 - 5.5	TTL	±8	50	3.0	60	-40 to 125
74AHCT04A	Hex inverter; TTL-enabled	4.5 - 5.5	TTL	±8	15	3.1	60	-40 to 125
74AHCT07A	Hex buffer; open-drain; TTL-enabled	4.5 - 5.5	TTL	±8	15	4.0	60	-40 to 125
74AHCT125	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.0	60	-40 to 125
74AHCT126	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.0	60	-40 to 125
74AHCT14	Hex inverting; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
74AHCT14A	Hex inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	15	3.7	60	-40 to 125
74AHCT17A	Hex buffer; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	15	3.2	60	-40 to 125
74AHCT1G04	Single inverter; TTL-enabled	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
74AHCT1G125	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
74AHCT1G126	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
74AHCT1G14	Single inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	50	4.1	60	-40 to 125
74AHCT1G17	Single buffer with Schmitt-trigger inputs; TTL-enabled	4.5 - 5.5	TTL	±8	50	4.1	60	-40 to 125
74AHCT240	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.0	60	-40 to 125
74AHCT244	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.5	60	-40 to 125
74AHCT244A	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	15	3.5	60	-40 to 125
74AHCT2G125	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125

## Buffers/Inverters/Drivers

Types in **bold** represent new products

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load CL (pF)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74AHCT2G126	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
74AHCT2G241	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
74AHCT3G04	Triple inverter; TTL-enabled	4.5 - 5.5	TTL	±8	50	3.0	60	-40 to 125
74AHCT3G14	Triple inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	50	4.1	60	-40 to 125
74AHCT541	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.5	60	-40 to 125
74AHCT541A	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	15	3.5	60	-40 to 125
74AHCU04	Hex inverter; unbuffered	2.0 - 5.5	CMOS	±8	50	2.4	60	-40 to 125
<b>74AHCV05A</b>	Hex inverter; Schmitt trigger; open-drain	2.0 - 5.5	CMOS	±16	15	8.5	10	-40 to 125
74AHCV07A	Hex buffer; Schmitt-trigger; open-drain	1.8 - 5.5	CMOS	16	15	3.8	60	-40 to 125
74AHCV14A	Hex inverter; Schmitt-trigger	1.8 - 5.5	CMOS	±16	15	3.2	60	-40 to 125
74AHCV17A	Hex buffer; Schmitt-trigger	1.8 - 5.5	CMOS	±16	15	3.2	60	-40 to 125
74AHCV244A	Octal buffer/line driver; Schmitt-trigger (3-state)	1.8 - 5.5	CMOS	±16	15	3.0	60	-40 to 125
74AHCV541A	Octal buffer/line driver; Schmitt-trigger (3-state)	1.8 - 5.5	CMOS	±16	15	3.0	60	-40 to 125
74ALVC04	Hex inverter	1.65 - 3.6	TTL	±24	30	2.0	150	-40 to 85
74ALVC125	Quad buffer/line driver (3-state)	1.65 - 3.6	TTL	±24	30	1.8	145	-40 to 85
74ALVC14	Hex inverter; Schmitt-trigger	1.65 - 3.6	TTL	±24	30	2.4	150	-40 to 85
74ALVC16244	16-bit buffer/line driver (3-state)	1.2 - 3.6	TTL	±24	50	1.9	150	-40 to 85
74ALVC244	Octal buffer/line driver (3-state)	1.65 - 3.6	TTL	±24	30	2.9	130	-40 to 85
74ALVC541	Octal buffer/line driver (3-state)	1.65 - 3.6	TTL	±24	30	2.3	130	-40 to 85
74ALVCH162244	16-bit buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	2.3 - 3.6	TTL	±12	30	2.7	150	-40 to 85
74ALVCH16244	16-bit buffer/line driver with bus hold (3-state)	1.2 - 3.6	TTL	±24	30	1.9	150	-40 to 85
74ALVCH162827	20-bit buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	2.3 - 3.6	TTL	±12	30	2.9	150	-40 to 85
74ALVCH16825	18-bit buffer/line driver with bus hold (3-state)	2.3 - 3.6	TTL	±24	30	2.0	150	-40 to 85
74ALVCH16827	20-bit buffer/line driver with bus hold (3-state)	2.3 - 3.6	TTL	±24	30	2.0	150	-40 to 85
74ALVT16244	16-bit buffer/line driver with bus hold (3-state)	2.3 - 3.6	LVTTTL	-32 / 64	50	1.5	200	-40 to 85
74ALVT162827	20-bit buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	2.3 - 3.6	LVTTTL	±12	50	2.2	75	-40 to 85
74ALVT16827	20-bit buffer/line driver with bus hold (3-state)	2.3 - 3.6	LVTTTL	-32 / 64	50	1.3	200	-40 to 85
74AUP1G04	Single inverter	1.1 - 3.6	CMOS	±1.9	30	4.0	70	-40 to 125
74AUP1G06	Single inverter; open drain	1.1 - 3.6	CMOS	1.9	30	4.5	70	-40 to 125
74AUP1G07	Single buffer; open drain	1.1 - 3.6	CMOS	1.9	30	4.4	70	-40 to 125
74AUP1G125	Single buffer/line driver (3-state)	1.1 - 3.6	CMOS	±1.9	30	4.3	70	-40 to 125
74AUP1G126	Single buffer/line driver (3-state)	1.1 - 3.6	CMOS	±1.9	30	4.3	70	-40 to 125
74AUP1G14	Single inverter; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	30	4.7	70	-40 to 125
74AUP1G16	Single buffer	1.1 - 3.6	CMOS	±1.9	30	4.7	70	-40 to 125
74AUP1G240	Single inverter/line driver (3-state)	1.1 - 3.6	CMOS	±1.9	30	4.2	70	-40 to 125
74AUP1G34	Single buffer	1.1 - 3.6	CMOS	±1.9	30	3.9	70	-40 to 125
74AUP1GU04	Single inverter; unbuffered	1.1 - 3.6	CMOS	±1.9	30	2.3	70	-40 to 125
74AUP1T04	Single supply voltage-translating inverter	2.3 - 3.6	CMOS	±4	15	3.9	70	-40 to 125
74AUP1T14	Single supply voltage-translating inverter	2.3 - 3.6	CMOS	±4	15	3.6	70	-40 to 125
74AUP1T17	Single supply voltage-translating buffer	2.3 - 3.6	CMOS	±4	15	3.6	70	-40 to 125
74AUP1T50	Single supply voltage-translating buffer	2.3 - 3.6	CMOS	±4	15	3.6	70	-40 to 125
74AUP2G04	Dual inverter	1.1 - 3.6	CMOS	±1.9	30	4.0	70	-40 to 125
74AUP2G06	Dual inverter; open drain	1.1 - 3.6	CMOS	1.9	30	4.5	70	-40 to 125



## Buffers/Inverters/Drivers

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load CL (pF)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74AUP2G07	Dual buffer; open drain	1.1 - 3.6	CMOS	1.9	30	4.4	70	-40 to 125
74AUP2G125	Dual buffer/line driver (3-state)	1.1 - 3.6	CMOS	+1.9	30	4.3	70	-40 to 125
74AUP2G126	Dual buffer/line driver (3-state)	1.1 - 3.6	CMOS	+1.9	30	4.3	70	-40 to 125
74AUP2G14	Dual inverter; Schmitt-trigger	1.1 - 3.6	CMOS	+1.9	30	4.7	70	-40 to 125
74AUP2G16	Dual buffer	1.1 - 3.6	CMOS	+1.9	30	4.7	70	-40 to 125
74AUP2G17	Dual buffer; Schmitt-trigger	1.1 - 3.6	CMOS	+1.9	30	7.8	70	-40 to 125
74AUP2G240	Dual inverter/line driver (3-state)	1.1 - 3.6	CMOS	+1.9	30	4.2	70	-40 to 125
74AUP2G241	Dual buffer/line driver (3-state)	1.1 - 3.6	CMOS	+ 1.9	30	4.3	70	-40 to 125
74AUP2G34	Dual buffer	1.1 - 3.6	CMOS	+1.9	30	3.9	70	-40 to 125
74AUP2GU04	Dual inverter; unbuffered	1.1 - 3.6	CMOS	+1.9	30	2.3	70	-40 to 125
74AUP3G04	Triple inverter	1.1 - 3.6	CMOS	+1.9	30	4.0	70	-40 to 125
74AUP3G14	Triple inverter; Schmitt-trigger	1.1 - 3.6	CMOS	+1.9	30	4.7	70	-40 to 125
74AUP3G16	Triple buffer	1.1 - 3.6	CMOS	+1.9	30	4.0	70	-40 to 125
74AUP3G17	Triple buffer; Schmitt-trigger	1.1 - 3.6	CMOS	+1.9	30	4.7	70	-40 to 125
74AVC16244	16-bit buffer/line driver (3-state)	0.8 - 3.6	CMOS/LVTTL	-12	30	2.0	200	-40 to 85
74AVC1T1004	1-to-4 translating fan-out buffer	0.8 - 3.6	CMOS/LVTTL	±12	15	4.9	200	-40 to 125
74AVC4T3144	4-bit dual-supply buffer/level-translator (3-state)	0.8 - 3.6	CMOS/ LVTTTL	±12	15	3.5	200	-40 to 125
74AVC9112	1-to-4 fan-out buffer	0.8 - 3.6	CMOS/LVTTL	±12	15	4.0	200	-40 to 125
74AVCH16244	16-bit buffer/line driver with bus hold (3-state)	0.8 - 3.6	CMOS/LVTTL	+12	30	2.0	200	-40 to 85
74AXP1G04	Single inverter	0.7 - 2.75	CMOS	+4.5	5	2.6	70	-40 to 85
74AXP1G06	Single inverter; open drain	0.7 - 2.75	CMOS	4.5	5	3.5	70	-40 to 85
74AXP1G07	Single buffer; open-drain	0.7 - 2.75	CMOS	4.5	5	3.5	70	-40 to 85
74AXP1G125	Single buffer/line driver (3-state)	0.7 - 2.75	CMOS	+4.5	5	2.7	70	-40 to 85
74AXP1G14	Single inverter; Schmitt-trigger	0.7 to 2.75	CMOS	+4.5	5	2.9	70	-40 to 85
74AXP1G17	Single buffer; Schmitt-trigger	0.7 to 2.75	CMOS	+4.5	5	2.8	70	-40 to 85
74AXP2G17	Dual buffer; Schmitt-trigger	0.7 to 2.75	CMOS	+4.5	5	2.8	70	-40 to 85
74AXP2G34	Dual buffer	0.7 to 2.75	CMOS	+4.5	5	2.5	70	-40 to 85
74AXP2G3404	Single buffer and Single inverter	0.7 to 2.75	CMOS	+4.5	5	2.5	70	-40 to 85
74HC04	Hex inverter	2.0 - 6.0	CMOS	+5.2	50	7.0	36	-40 to 125
74HC05	Hex inverter; open drain	2.0 - 6.0	CMOS	5.2	50	11	36	-40 to 125
74HC125	Quad buffer/line driver (3-state)	2.0 - 6.0	CMOS	+7.8	50	9.0	36	-40 to 125
74HC126	Quad buffer/line driver (3-state)	2.0 - 6.0	CMOS	+7.8	50	9.0	36	-40 to 125
74HC14	Hex inverter; Schmitt-trigger	2.0 - 6.0	CMOS	+5.2	50	12	36	-40 to 125
74HC1G04	Single inverter	2.0 - 6.0	CMOS	+2.6	50	7.0	36	-40 to 125
74HC1G125	Single buffer/line driver (3-state)	2.0 - 6.0	CMOS	+2.6	50	9.0	36	-40 to 125
74HC1G126	Single buffer/line driver (3-state)	2.0 - 6.0	CMOS	+2.6	50	9.0	36	-40 to 125
74HC1G14	Single inverter; Schmitt-trigger	2.0 - 6.0	CMOS	+2.6	50	10	36	-40 to 125
74HC1GU04	Single inverter; unbuffered	2.0 - 6.0	CMOS	+ 2.6	50	5.0	36	-40 to 125
74HC240	Octal inverter/line driver (3-state)	2.0 - 6.0	CMOS	+7.8	50	9.0	36	-40 to 125
74HC241	Octal buffer/line driver (3-state)	2.0 - 6.0	CMOS	+7.8	50	7.0	36	-40 to 125
74HC244	Octal buffer/line driver (3-state)	2.0 - 6.0	CMOS	+7.8	50	9.0	36	-40 to 125
74HC2G04	Dual inverter	2.0 - 6.0	CMOS	±5.2	50	8.0	36	-40 to 125
74HC2G125	Dual buffer/line driver (3-state)	2.0 - 6.0	CMOS	±5.2	50	10	36	-40 to 125

## Buffers/Inverters/Drivers

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load CL (pF)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74HC2G14	Dual inverter; Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	50	16	36	-40 to 125
74HC2G17	Dual buffer; Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	50	12	36	-40 to 125
74HC2G34	Dual buffer	2.0 - 6.0	CMOS	±5.2	50	9.0	36	-40 to 125
74HC2GU04	Single inverter; unbuffered	2.0 - 6.0	CMOS	±2.6	50	5.0	36	-40 to 125
74HC365	Hex buffer/line driver (3-state)	2.0 - 6.0	CMOS	±7.8	50	9.0	36	-40 to 125
74HC366	Hex inverter/line driver (3-state)	2.0 - 6.0	CMOS	±7.8	50	10	36	-40 to 125
74HC367	Hex buffer/line driver (3-state)	2.0 - 6.0	CMOS	±7.8	50	8.0	36	-40 to 125
74HC368	Hex inverter/line driver (3-state)	2.0 - 6.0	CMOS	±7.8	50	9.0	36	-40 to 125
74HC3G04	Triple inverter	2.0 - 6.0	CMOS	±5.2	50	8.0	36	-40 to 125
74HC3G06	Triple inverter; open drain	2.0 - 6.0	CMOS	5.2	50	9.0	36	-40 to 125
74HC3G07	Triple buffer; open drain	2.0 - 6.0	CMOS	5.2	50	9.0	36	-40 to 125
74HC3G14	Triple inverter; Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	50	16	36	-40 to 125
74HC3G16	Triple buffer	2.0 - 6.0	CMOS	±5.2	50	9.0	36	-40 to 125
74HC3G34	Triple buffer	2.0 - 6.0	CMOS	±5.2	50	9.0	36	-40 to 125
74HC3GU04	Triple inverter; unbuffered	2.0 - 6.0	CMOS	±5.2	50	6.0	36	-40 to 125
74HC540	Octal inverter/line driver (3-state)	2.0 - 6.0	CMOS	±7.8	50	9.0	36	-40 to 125
74HC541	Octal buffer/line driver (3-state)	2.0 - 6.0	CMOS	±7.8	50	10	36	-40 to 125
74HC7014	Hex buffer; precision Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	50	27	36	-40 to 125
74HC7540	Octal inverter/line driver; Schmitt-trigger (3-State)	2.0 - 6.0	CMOS	±7.8	15	11	36	-40 to 125
74HC7541	Octal buffer/line driver; Schmitt-trigger (3-State)	2.0 - 6.0	CMOS	±7.8	15	10	36	-40 to 125
74HC9114	9-bit inverter; Schmitt-trigger; open-drain (3-state)	2.0 - 6.0	CMOS	5.2	15	12	36	-40 to 125
74HC9115	9-bit buffer; Schmitt-trigger; open-drain (3-state)	2.0 - 6.0	CMOS	5.2	15	12	36	-40 to 125
74HCT04	Hex inverter; TTL-enabled	4.5 - 5.5	TTL	±4	50	8.0	36	-40 to 125
74HCT125	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	12	36	-40 to 125
74HCT126	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT14	Hex inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4	50	17	36	-40 to 125
74HCT1G04	Single inverter; TTL-enabled	4.5 - 5.5	TTL	±2	50	8.0	36	-40 to 125
74HCT1G125	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±2	50	10	36	-40 to 125
74HCT1G126	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±2	50	10	36	-40 to 125
74HCT1G14	Single inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±2	50	15	36	-40 to 125
74HCT240	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	9.0	36	-40 to 125
74HCT241	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT244	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT2G04	Dual inverter; TTL-enabled	4.5 - 5.5	TTL	±4	50	10	36	-40 to 125
74HCT2G125	Dual buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±4	50	12	36	-40 to 125
74HCT2G14	Dual inverter; Schmitt-trigger; TTL-enabled	4.5 to 5.5	TTL	±4	50	21	36	-40 to 125
74HCT2G17	Dual buffer; Schmitt-trigger; TTL-enabled	4.5 to 5.5	TTL	±4	50	21	36	-40 to 125
74HCT2G34	Dual buffer; TTL-enabled	4.5 - 5.5	TTL	±4	50	10	32	-40 to 125
74HCT365	Hex buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT366	Hex inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT367	Hex buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT368	Hex inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT3G04	Triple inverter; TTL-enabled	4.5 - 5.5	TTL	±4	50	10	36	-40 to 125

## Buffers/Inverters/Drivers

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load CL (pF)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74HCT3G06	Triple inverter; open drain; TTL-enabled	4.5 - 5.5	TTL	4	50	9.0	36	-40 to 125
74HCT3G07	Triple buffer; open drain; TTL-enabled	4.5 - 5.5	TTL	4	50	9.0	36	-40 to 125
74HCT3G14	Triple inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4	50	21	36	-40 to 125
74HCT3G16	Triple buffer; TTL-enabled	4.5 - 5.5	TTL	±4	50	10	36	-40 to 125
74HCT3G34	Triple buffer; TTL-enabled	4.5 - 5.5	TTL	±4	50	10	36	-40 to 125
74HCT540	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	11	36	-40 to 125
74HCT541	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	12	36	-40 to 125
74HCT7540	Octal inverter/line driver Schmitt-trigger; TTL-enabled (3-State)	4.5 - 5.5	TTL	±6	15	16	36	-40 to 125
74HCT7541	Octal buffer/line driver Schmitt-trigger; TTL-enabled (3-State)	4.5 - 5.5	TTL	±6	15	16	36	-40 to 125
74HCT9114	9-bit inverter Schmitt-trigger; open-drain; TTL-enabled (3-state)	4.5 - 5.5	TTL	4	15	13	36	-40 to 125
74HCU04	Hex inverter; unbuffered	2.0 - 6.0	CMOS	±5.2	50	5.0	36	-40 to 125
74LV04	Hex inverter	1.0 - 5.5	CMOS	±12	50	6.0	30	-40 to 125
74LV04AT	Hex buffer	4.5 - 5.5	TTL	±12	15	3.3	60	-40 to 125
74LV05A	Hex inverter; open-drain	2.0 - 5.5	CMOS	12	15	2.9	60	-40 to 125
74LV07A	Hex buffer; open-drain	2.0 - 5.5	CMOS	16	15	3.6	60	-40 to 125
74LV07AT	Hex buffer; open-drain; TTL-enabled	4.5 - 5.5	TTL	16	15	3.5	60	-40 to 125
74LV14	Hex inverter; Schmitt-trigger	1.0 - 5.5	TTL	±12	50	13	30	-40 to 125
74LV14A	Hex inverter; Schmitt-trigger	2.0 - 5.5	CMOS	±12	15	3.4	60	-40 to 125
74LV17A	Hex buffer; Schmitt-trigger	2.0 - 5.5	CMOS	±12	15	3.4	60	-40 to 125
74LV1T04	Single supply translating inverter	1.6 - 5.5	CMOS	±8	15	3.1	60	-40 to 125
74LV1T34	Single supply translating buffer	1.6 - 5.5	CMOS	±8	15	3.1	60	-40 to 125
74LV1T125	Single supply translating buffer / line driver (3-state)	1.6 - 5.5	CMOS	±8	15	3.2	60	-40 to 125
74LV1T126	Single supply translating buffer / line driver (3-state)	1.6 - 5.5	CMOS	±8	15	3.2	60	-40 to 125
74LV244	Octal buffer/line driver (3-state)	1.0 - 5.5	CMOS	±16	50	8.0	30	-40 to 125
74LV244A	Octal buffer/line driver (3-state)	2.0 - 5.5	CMOS	±16	15	2.9	60	-40 to 125
74LV244AT	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±16	15	2.8	60	-40 to 125
74LV365	Hex buffer/line driver (3-state)	1.0 - 3.6	CMOS	±8	50	9.0	30	-40 to 125
74LV540A	Octal buffer/line driver (3-state); inverting	1.65 - 5.5	CMOS/LVTTL	±16	15	3.1	60	-40 to 125
74LV541A	Octal buffer/line driver (3-state)	2.0 - 5.5	CMOS	±16	15	2.9	60	-40 to 125
74LV541AT	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±16	15	2.8	60	-40 to 125
74LVC04A	Hex inverter	1.65 - 5.5	CMOS/LVTTL	±24	50	2.0	175	-40 to 125
74LVC06A	Hex inverter; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.2	175	-40 to 125
74LVC07A	Hex buffer; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.2	175	-40 to 125
74LVC125A	Quad buffer/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.4	175	-40 to 125
74LVC126A	Quad buffer/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.4	175	-40 to 125
74LVC14A	Hex inverter; Schmitt-trigger	1.2 - 3.6	CMOS/LVTTL	±24	50	3.2	175	-40 to 125
74LVC162244A	16-bit buffer/line driver with 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.9	175	-40 to 125
74LVC16240A	16-bit inverter/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.7	175	-40 to 125
74LVC16241A	16-bit buffer/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.9	175	-40 to 125
74LVC16244A	16-bit buffer/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	3.0	175	-40 to 125
74LVC1G04	Single inverter	1.65 - 5.5	CMOS/LVTTL	±32	50	2.0	175	-40 to 125
74LVC1G06	Single inverter; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.3	175	-40 to 125
74LVC1G07	Single buffer; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.2	175	-40 to 125

## Buffers/Inverters/Drivers

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74LVC1G125	Single buffer/line driver; TTL-enabled (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	50	2.1	175	-40 to 125
74LVC1G126	Single buffer/line driver; TTL-enabled (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	50	2.0	175	-40 to 125
74LVC1G14	Single inverter; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	50	3.0	175	-40 to 125
74LVC1G16	Single buffer	1.65 - 5.5	CMOS/LVTTL	±24	50	2.0	175	-40 to 125
74LVC1G17	Single buffer; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	50	3.0	175	-40 to 125
74LVC1G34	Single buffer	1.65 - 5.5	CMOS/LVTTL	±24	50	2.0	175	-40 to 125
74LVC1GU04	Single inverter; unbuffered	1.65 - 5.5	CMOS/LVTTL	±32	50	1.6	175	-40 to 125
74LVC2244A	Octal buffer/line driver with 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/LVTTL	±12	50	3.1	175	-40 to 125
74LVC240A	Octal inverter/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	3.5	175	-40 to 125
74LVC244A	Octal buffer/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.8	175	-40 to 125
74LVC2G04	Dual inverter	1.65 - 5.5	CMOS/LVTTL	±24	50	2.7	175	-40 to 125
74LVC2G06	Dual inverter; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.3	175	-40 to 125
74LVC2G07	Dual buffer; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.6	175	-40 to 125
74LVC2G125	Dual buffer/line driver; TTL-enabled (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	50	2.3	175	-40 to 125
74LVC2G126	Dual buffer/line driver; TTL-enabled (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	50	2.4	175	-40 to 125
74LVC2G14	Dual inverter; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	50	3.9	175	-40 to 125
74LVC2G16	Dual buffer	1.65 - 5.5	CMOS/LVTTL	±24	50	2.0	175	-40 to 125
74LVC2G17	Dual buffer; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	50	3.6	175	-40 to 125
74LVC2G240	Dual inverter/line driver (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	50	2.5	175	-40 to 125
74LVC2G241	Dual buffer/line driver (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	50	2.6	175	-40 to 125
74LVC2G34	Dual buffer	1.65 - 5.5	CMOS/LVTTL	±32	50	2.2	175	-40 to 125
74LVC2GU04	Dual inverter; unbuffered	1.65 - 5.5	CMOS/LVTTL	±32	50	2.3	175	-40 to 125
74LVC3G04	Triple inverter	1.65 - 5.5	CMOS/LVTTL	±32	50	2.7	175	-40 to 125
74LVC3G06	Triple inverter; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.0	175	-40 to 125
74LVC3G07	Triple buffer; open drain	1.65 - 5.5	CMOS/LVTTL	32	50	2.1	175	-40 to 125
74LVC3G14	Triple inverter; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	50	3.2	175	-40 to 125
74LVC3G16	Triple buffer	1.65 - 5.5	CMOS/LVTTL	±24	50	2.0	175	-40 to 125
74LVC3G17	Triple buffer; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	50	3.6	175	-40 to 125
74LVC3G34	Triple buffer	1.65 - 5.5	CMOS/LVTTL	±32	50	2.2	175	-40 to 125
74LVC3GU04	Triple inverter; unbuffered	1.65 - 5.5	CMOS/LVTTL	±32	50	2.3	175	-40 to 125
74LVC541A	Octal buffer/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	3.3	175	-40 to 125
74LVC827A	10-bit buffer/line driver (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	4.0	175	-40 to 125
74LVCH162244A	16-bit buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/LVTTL	±12	50	2.9	175	-40 to 125
74LVCH16244A	16-bit buffer/line driver with bus hold (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	3.0	175	-40 to 125
74LVCH16541A	16-bit buffer/line driver with bus hold (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.7	175	-40 to 125
74LVCH244A	Octal buffer/line driver with bus hold (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.8	175	-40 to 125
74LVCU04A	Hex inverter; unbuffered	1.2 - 3.6	CMOS/LVTTL	±24	50	2.0	175	-40 to 125
74LVT04	Hex inverter	2.7 - 3.6	TTL	-20 / 32	50	2.6	150	-40 to 85
74LVT125	Quad buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.9	150	-40 to 85
74LVT126	Quad buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.4	150	-40 to 85
74LVT14	Hex inverter; Schmitt-trigger	2.7 - 3.6	TTL	-32 / 64	50	3.8	150	-40 to 85
74LVT162240A	16-bit inverter/line driver with bus hold and 30 Ω termination (3-state)	2.7 - 3.6	TTL	±12	50	2.6	150	-40 to 85
74LVT162244B	16-bit buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	2.7 - 3.6	TTL	±12	50	2.8	150	-40 to 85

## Buffers/Inverters/Drivers

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load CL (pF)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74LVT16240A	16-bit inverter/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.0	150	-40 to 85
74LVT16244B	16-bit buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	1.8	150	-40 to 85
74LVT2241	Octal buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	2.7 - 3.6	TTL	±12	50	3.3	150	-40 to 85
74LVT2244	Octal buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	2.7 - 3.6	TTL	±12	50	2.9	150	-40 to 85
74LVT240	Octal inverter/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.5	150	-40 to 85
74LVT241	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.8	150	-40 to 85
74LVT244A	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.6	150	-40 to 85
74LVT244B	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.0	150	-40 to 85
74LVTH125	Quad buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.9	150	-40 to 85
74LVTH16244B	16-bit buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	1.8	150	-40 to 85
74LVTH244A	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.6	150	-40 to 85
74LVTH244B	Octal buffer/line driver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	50	2.0	150	-40 to 85
74LVTN16244B	16-bit buffer/line driver (3-state)	2.7 - 3.6	TTL	-32 / 64	50	1.8	150	-40 to 85
74VHC125	Quad buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.0	60	-40 to 125
74VHC126	Quad buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.3	60	-40 to 125
74VHC14	Hex inverter; Schmitt-trigger	2.0 - 5.5	CMOS	±8	50	3.2	60	-40 to 125
74VHC244	Octal inverter/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.5	60	-40 to 125
74VHC541	Octal buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.5	60	-40 to 125
74VHCT125	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.0	60	-40 to 125
74VHCT126	Quad buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.0	60	-40 to 125
74VHCT14	Hex inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	50	4.1	60	-40 to 125
74VHCT244	Octal inverter/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	5.0	60	-40 to 125
74VHCT541	Octal buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.5	60	-40 to 125
HEF40098B	Hex inverter	3.0 - 15.0	CMOS	-10 / 20	50	25	10	-40 to 125
HEF40244B	Octal buffer/line driver (3-state)	3.0 - 15.0	CMOS	-62 / 45	50	30	10	-40 to 125
HEF4049B	Hex inverter/line driver	3.0 - 15.0	CMOS	-3 / 20	50	20	10	-40 to 125
HEF4050B	Hex buffer/line driver	3.0 - 15.0	CMOS	-3 / 20	50	40	10	-40 to 125
HEF4069UB	Hex inverter; unbuffered	3.0 - 15.0	CMOS	±3.4	50	15	10	-40 to 125
PDI1284P11	Printer parallel interface transceiver/buffer	3.0 - 3.6	LVTTTL	±14	50	13.9		0 to 70
XC7SET04	Single inverter; TTL-enabled	4.5 - 5.5	TTL	±8	50	3.5	60	-40 to 125
XC7SET125	Single buffer/line driver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.4	60	-40 to 125
XC7SET14	Single inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	50	4.1	60	-40 to 125
XC7SH04	Single inverter	2.0 - 5.5	CMOS	±8	50	3.5	60	-40 to 125
XC7SH125	Single buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.4	60	-40 to 125
XC7SH14	Single inverter; Schmitt-trigger	2.0 - 5.5	CMOS	±8	50	3.2	60	-40 to 125
XC7SHU04	Single inverter; unbuffered	2.0 - 5.5	CMOS	±8	50	3.5	60	-40 to 125
XC7WH126	Dual buffer/line driver (3-state)	2.0 - 5.5	CMOS	±8	50	3.4	60	-40 to 125
XC7WH14	Triple inverter; Schmitt-trigger	2.0 - 5.5	CMOS	±8	50	3.2	60	-40 to 125
XC7WT14	Triple inverter; Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	50	4.1	60	-40 to 125

## Schmitt-triggers

Types in **bold** represent new products

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74AHC132	Quad 2-input NAND gate Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.3	50	60	4	-40 to 125
74AHC14	Hex inverter Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.2	50	60	6	-40 to 125
74AHC1G14	Single inverter Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125
74AHC1G17	Single buffer Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125
74AHC3G14	Triple inverter Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.2	50	60	3	-40 to 125
74AHCT132	Quad 2-input NAND gate Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	3.5	50	60	4	-40 to 125
74AHCT14	Hex inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.0	50	60	6	-40 to 125
74AHCT17A	Hex buffer Schmitt-trigger	4.5 - 5.5	TTL	±8	3.2	50	60	8	-40 to 125
74AHCT1G14	Single inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.1	50	60	1	-40 to 125
74AHCT1G17	Single buffer Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.1	50	60	1	-40 to 125
74AHCT3G14	Triple inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.1	50	60	3	-40 to 125
<b>74AHCV05A</b>	Hex inverter; Schmitt trigger; open-drain	2.0 - 5.5	CMOS	±16	5.8	15	10	6	-40 to 125
74AHCV07A	Hex buffer Schmitt-trigger; open-drain	1.8 - 5.5	CMOS	16	3.8	15	60	6	-40 to 125
74AHCV14A	Hex inverter Schmitt-trigger	1.8 - 5.5	CMOS	±16	3.2	15	60	6	-40 to 125
74AHCV17A	Hex buffer Schmitt-trigger	1.8 - 5.5	CMOS	±16	3.2	15	60	6	-40 to 125
74AHCV244A	Octal buffer/line driver Schmitt-trigger (3-state)	1.8 - 5.5	CMOS	±16	3.0	15	60	8	-40 to 125
74AHCV245A	Octal transceiver Schmitt-trigger (3-state)	1.8 - 5.5	CMOS	±16	3.2	15	60	8	-40 to 125
74AHCV541A	Octal buffer/line driver Schmitt-trigger (3-state)	1.8 - 5.5	CMOS	±16	3.0	15	60	8	-40 to 125
74ALVC14	Hex inverter Schmitt-trigger	1.65 - 3.6	TTL	±24	2.4	50	150	6	-40 to 85
74AUP1G132	Single 2-input NAND gate Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	10.0	30	70	1	-40 to 125
74AUP1G14	Single inverter Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	4.7	30	70	1	-40 to 125
74AUP1G17	Single buffer Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	7.8	30	70	1	-40 to 125
74AUP1G57	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	1	-40 to 125
74AUP1G58	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	1	-40 to 125
74AUP1G97	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	1	-40 to 125
74AUP1G98	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.9	30	70	1	-40 to 125
74AUP2G132	Dual 2-input NAND gate Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	10	30	70	2	-40 to 125
74AUP2G14	Dual inverter Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	4.7	30	70	2	-40 to 125
74AUP2G17	Dual buffer Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	7.8	30	70	2	-40 to 125
74AUP2G58	Dual configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	2	-40 to 125
74AUP2G97	Dual configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	2	-40 to 125

## Schmitt-triggers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74AUP2G98	Dual configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.9	30	70	2	-40 to 125
74AUP3G14	Triple inverter Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	2.4	30	70	3	-40 to 125
74AUP3G17	Triple Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	2.4	30	70	3	-40 to 125
74AXP1G14	Single inverter Schmitt-trigger	0.7 - 2.75	CMOS	±4.5	2.9	5	70	1	-40 to 85
74AXP1G17	Single buffer Schmitt-trigger	0.7 - 2.75	CMOS	±4.5	2.8	5	70	1	-40 to 85
74AXP1G57	Configurable gate; Schmitt-trigger	0.7 - 2.75	CMOS	±4.5	4.6	5	70	1	-40 to 85
74AXP1G58	Configurable gate; Schmitt-trigger	0.7 - 2.75	CMOS	±4.5	4.5	5	70	1	-40 to 85
74AXP1G97	Configurable gate; Schmitt-trigger	0.7 - 2.75	CMOS	±4.5	4.5	5	70	1	-40 to 85
74AXP1G98	Configurable gate; Schmitt-trigger	0.7 - 2.75	CMOS	±4.5	4.5	5	70	1	-40 to 85
74AXP1T14	Dual-supply Schmitt-trigger inverter	0.75 - 2.75	CMOS	±12	4.9	5	45	1	-40 to 125
74AXP1T57	Single dual-supply translating configurable gate; Schmitt-trigger inputs	0.75 - 2.75	CMOS	±12	4.8	5	45	1	-40 to 125
74AXP2G14	Dual inverter Schmitt-trigger	0.7 - 2.75	CMOS	±4.5	2.9	5	70	2	-40 to 85
74AXP2G17	Dual buffer Schmitt-trigger	0.7 - 2.75	CMOS	±4.5	2.8	5	70	1	-40 to 85
74HC132	Quad 2-input NAND gate Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	11	50	36	4	-40 to 125
74HC14	Hex inverter Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	12	50	36	6	-40 to 125
74HC1G14	Single inverter Schmitt-trigger	2.0 - 6.0	CMOS	±2.6	10	50	36	1	-40 to 125
74HC2G14	Dual inverter Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	16	50	36	2	-40 to 125
74HC2G17	Dual buffer Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	12	50	36	2	-40 to 125
74HC3G14	Triple inverter Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	16	50	36	3	-40 to 125
74HC7014	Hex buffer precision Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	27	50	36	6	-40 to 125
74HC7540	Octal inverter/line driver Schmitt-trigger (3-state)	2.0 - 6.0	CMOS	±7.8	11	50	36	8	-40 to 125
74HC7541	Octal buffer/line driver Schmitt-trigger (3-state)	2.0 - 6.0	CMOS	±7.8	11	50	36	8	-40 to 125
74HC9114	9-bit inverter Schmitt-trigger; open drain (3-state)	2.0 - 6.0	CMOS	5.2	12	50	36	9	-40 to 125
74HC9115	9-bit buffer Schmitt-trigger; open drain (3-state)	2.0 - 6.0	CMOS	5.2	12	50	36	9	-40 to 125
74HCT132	Quad 2-input NAND gate Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4	17	50	36	4	-40 to 125
74HCT14	Hex inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4	17	50	36	6	-40 to 125
74HCT1G14	Single inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±2.0	15	50	36	1	-40 to 125
74HCT2G14	Dual inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4.0	21	50	36	2	-40 to 125
74HCT2G17	Dual buffer Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4.0	21	50	36	2	-40 to 125
74HCT3G14	Triple inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4.0	21	50	36	3	-40 to 125
74HCT7540	Octal inverter/line driver Schmitt-trigger; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	16	50	36	8	-40 to 125

## Schmitt-triggers

Types in **bold** represent new products

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74HCT7541	Octal buffer/line driver Schmitt-trigger; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	16	50	36	8	-40 to 125
74HCT9114	9-bit inverter Schmitt-trigger; open drain; TTL-enabled (3-state)	4.5 - 5.5	TTL	4	13	50	36	9	-40 to 125
74LV132	Quad 2-input NAND gate Schmitt-trigger	1.0 - 5.5	TTL	±12	10	50	30	4	-40 to 125
74LV14	Hex inverter Schmitt-trigger	1.0 - 5.5	TTL	±12	13	50	30	6	-40 to 125
74LV14A	Hex inverter Schmitt-trigger	2.0 - 5.5	CMOS	±12	3.4	15	60	6	-40 to 125
<b>74LV7032A</b>	Quad 2-input OR gate; Schmitt trigger	2.0 - 5.5	CMOS	±12	4.3	15	45	4	-40 to 125
74LVC132A	Quad 2-input NAND gate Schmitt-trigger	1.2 - 3.6	CMOS/LVTTL	±24	3.4	50	175	4	-40 to 125
74LVC14A	Hex inverter Schmitt-trigger	1.2 - 3.6	CMOS/LVTTL	±24	3.2	50	175	6	-40 to 125
74LVC1G14	Single inverter Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.0	50	175	1	-40 to 125
74LVC1G17	Single buffer Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.0	50	175	1	-40 to 125
74LVC1G57	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G58	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G97	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G98	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G99	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	8.4	50	150	1	-40 to 125
74LVC2G14	Dual inverter Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.9	50	175	2	-40 to 125
74LVC2G17	Dual buffer Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.6	50	175	2	-40 to 125
74LVC3G14	Triple inverter Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.2	50	175	3	-40 to 125
74LVC3G17	Triple buffer Schmitt-trigger	1.65 - 5.5	CMOS/LVTTL	±32	3.6	50	175	3	-40 to 125
74LVT14	Hex inverter Schmitt-trigger	2.7 - 3.6	TTL	±32	3.8	50	150	6	-40 to 125
74VHC14	Hex inverter Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.2	50	60	6	-40 to 125
74VHCT14	Hex inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.1	50	60	6	-40 to 125
HEF40106B	Hex inverter Schmitt-trigger	3.0 - 15	CMOS	±2.4	30	50	10	6	-40 to 85
HEF4093B	Quad 2-input NAND gate Schmitt-trigger	3.0 - 15	CMOS	±2.4	30	50	10	4	-40 to 125
XC7SET14	Single inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.1	50	60	1	-40 to 125
XC7SH14	Single inverter Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125
XC7WH14	Triple inverter Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.2	50	60	3	-40 to 125
XC7WT14	Triple inverter Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.1	50	60	3	-40 to 125



## Transceivers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Number of bits	f <sub>max</sub> (MHz)	T <sub>vj</sub> (°C)
74ABT162245A	16-bit transceiver with 30 ohm termination resistors (3-state)	4.5 - 5.5	TTL	-32 / 12	3.0	16	100	-40 to 85
74ABT16245B	16-bit transceiver (3-state)	4.5 - 5.5	TTL	-32 / 64	2.3	16	150	-40 to 85
74ABT245	Octal transceiver (3-state)	4.5 - 5.5	TTL	-32 / 64	2.9	8	100	-40 to 85
74ABTH162245A	16-bit transceiver with bus hold and 30 ohm termination resistors (3-state)	4.5 - 5.5	TTL	-32 / 12	3.0	16	80	-40 to 85
74AHC245	Octal transceiver (3-state)	2.0 - 5.5	CMOS	±8	3.5	8	60	-40 to 125
74AHCT245	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	5.0	8	60	-40 to 125
74AHCT245A	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	3.0	8	60	-40 to 125
74AHCV245A	Octal transceiver; Schmitt-trigger (3-state)	1.8 - 5.5	CMOS	±16	3.2	8	60	-40 to 125
74ALVC16245	16-bit transceiver (3-state)	1.65 - 3.6	TTL	±24	1.9	16	150	-40 to 85
74ALVC245	Octal transceiver (3-state)	1.65 - 3.6	TTL	±24	2.3	8	130	-40 to 85
74ALVCH162245	16-bit transceiver with bus hold and 30 Ω termination resistors (3-state)	1.65 - 3.6	TTL	±12	2.4	16	150	-40 to 85
74ALVCH16245	16-bit transceiver with bus hold (3-state)	1.65 - 3.6	TTL	±24	1.9	16	150	-40 to 85
74ALVCH162601	18-bit universal bus transceiver with bus hold and 30 Ω termination resistors; positive-edge trigger (3-state)	1.65 - 3.6	TTL	±12	3.1	18	150	-40 to 85
74ALVCH16500	18-bit universal bus transceiver with bus hold; negative edge trigger (3-state)	1.65 - 3.6	TTL	±24	2.9	18	150	-40 to 85
74ALVCH16501	18-bit universal bus transceiver with bus hold; positive edge trigger (3-state)	1.65 - 3.6	TTL	±24	2.8	18	150	-40 to 85
74ALVCH16543	16-bit registered transceiver with bus hold (3-state)	1.65 - 3.6	TTL	±24	3.8	16	150	-40 to 85
74ALVCH16600	18-bit universal bus transceiver with bus hold; negative edge trigger (3-state)	1.65 - 3.6	TTL	±24	2.8	18	150	-40 to 85
74ALVCH16601	18-bit universal bus transceiver with bus hold; positive edge trigger (3-state)	1.65 - 3.6	TTL	±24	2.8	18	150	-40 to 85
74ALVCH16646	16-bit registered transceiver with bus hold (3-state)	1.65 - 3.6	TTL	±24	2.6	16	150	-40 to 85
74ALVCH16652	16-bit registered transceiver with bus hold (3-state)	1.65 - 3.6	TTL	±24	2.6	16	150	-40 to 85
74ALVCH16952	16-bit registered transceiver with bus hold (3-state)	1.65 - 3.6	TTL	±24	3.2	16	150	-40 to 85
74ALVT162245	16-bit transceiver with bus hold and 30 Ω termination resistors (3-state)	2.3 - 3.6	TTL	±12	2.3	16	75	-40 to 85
74AVC16245	16-bit transceiver (3-state)	1.2 - 3.6	CMOS	±12	2.0	16	200	-40 to 85
74AVC4T774	4-bit dual supply translating transceiver (3-state)	0.8 - 3.6	CMOS/ LVTTTL	±12	3.5	4	200	-40 to 125
74AVCH16245	16-bit transceiver with bus hold (3-state)	1.2 - 3.6	CMOS	±12	2.0	16	200	-40 to 85
74HC245	Octal transceiver (3-state)	2.0 - 6.0	CMOS	±7.8	7.0	8	36	-40 to 125
74HCT245	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	10	8	36	-40 to 125
74LV245	Octal transceiver (3-state)	1.0 - 5.5	TTL	±16	7.0	8	30	-40 to 125
74LV245A	Octal transceiver (3-state)	2.0 - 5.5	CMOS	±16	3	8	60	-40 to 125
74LV245AT	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±16	3	8	60	-40 to 125
74LVC162245A	16-bit transceiver with 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/LVTTTL	±12	3.3	16	175	-40 to 125
74LVC16245A	16-bit transceiver (3-state)	1.2 - 3.6	CMOS/LVTTTL	±24	3.0	16	175	-40 to 125
74LVC2245A	Octal transceiver with 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/LVTTTL	±12	3.3	8	175	-40 to 125
74LVC245A	Octal transceiver (3-state)	1.2 - 3.6	CMOS/LVTTTL	±24	2.9	8	175	-40 to 125
74LVC32245A	32-bit transceiver (3-state)	1.2 - 3.6	CMOS/LVTTTL	±24	2.2	32	175	-40 to 125
74LVCH162245A	16-bit transceiver with bus hold and 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/LVTTTL	±12	3.3	16	175	-40 to 125
74LVCH16245A	16-bit transceiver with bus hold (3-state)	1.2 - 3.6	CMOS/LVTTTL	±24	3.0	16	175	-40 to 125
74LVCH245A	Octal transceiver with bus hold (3-state)	1.2 - 3.6	CMOS/LVTTTL	±24	2.9	8	175	-40 to 125

## Transceivers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Number of bits	f <sub>max</sub> (MHz)	T <sub>vj</sub> (°C)
74LVT162245B	16-bit transceiver with bus hold and 30 Ω termination resistors (3-state)	2.7 - 3.6	TTL	±12	2.5	16	150	-40 to 85
74LVT16245B	16-bit transceiver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	1.9	16	150	-40 to 85
74LVT16543A	16-bit registered transceiver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	2.2	16	150	-40 to 85
74LVT16543A	16-bit registered transceiver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	2	16	150	-40 to 85
74LVT2245	Octal transceiver with bus hold and 30 Ω termination resistors (3-state)	2.7 - 3.6	TTL	±12	3.2	8	150	-40 to 85
74LVT245	Octal transceiver (3-state)	2.7 - 3.6	TTL	-32 / 64	2.4	8	150	-40 to 85
74LVT245B	Octal transceiver (3-state)	2.7 - 3.6	TTL	-32 / 64	2	8	150	-40 to 85
74LVT640	Octal transceiver with bus hold; inverting (3-state)	2.7 - 3.6	TTL	-32 / 64	2.4	8	150	-40 to 85
74LVTH16245B	16-bit transceiver with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	1.9	16	150	-40 to 85
74LVTH2245	Octal transceiver with bus hold and 30 Ω termination resistors (3-state)	2.7 - 3.6	TTL	±12	3.2	8	150	-40 to 85
74LVTN16245B	16-bit transceiver (3-state)	2.7 - 3.6	TTL	-32 / 64	1.9	16	150	-40 to 85
74VHC245	Octal transceiver (3-state)	2.0 - 5.5	CMOS	±8	3.5	8	60	-40 to 125
74VHCT245	Octal transceiver; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	5.0	8	60	-40 to 125

## Voltage translators (level-shifters)

Type number	Description	V <sub>CC(A)</sub> (V)	V <sub>CC(B)</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	Number of bits	T <sub>amb</sub> (°C)
74ALVC164245	16-bit dual-supply voltage-translating transceiver (3-state)	1.5 - 5.5	1.5 - 3.6	CMOS/LVTTL	±24	2.9	50	16	-40 to 85
74AUP1T00	Single supply 2-input voltage-translating NAND gate	2.3 - 3.6	n.a.	CMOS	±4	3.7	15	1	-40 to 125
74AUP1T02	Single supply 2-input voltage-translating NOR gate	2.3 - 3.6	n.a.	CMOS	±4	3.6	15	1	-40 to 125
74AUP1T04	Single supply voltage-translating inverter	2.3 - 3.6	n.a.	CMOS	±4	3.6	15	1	-40 to 125
74AUP1T08	Single supply 2-input voltage-translating AND gate	2.3 - 3.6	n.a.	CMOS	±4	3.6	15	1	-40 to 125
74AUP1T14	Single supply voltage-translating inverter	2.3 - 3.6	n.a.	CMOS	±4	3.6	15	1	-40 to 125
74AUP1T17	Single supply voltage-translating buffer	2.3 - 3.6	n.a.	CMOS	±4	3.6	15	1	-40 to 125
74AUP1T32	Single supply 2-input voltage-translating OR gate	2.3 - 3.6	n.a.	CMOS	±4	3.6	15	1	-40 to 125
74AUP1T34	Single dual-supply translating buffer	1.1 - 3.6	1.1 - 3.6	CMOS	±4	3.9	15	1	-40 to 125
74AUP1T45	Single dual-supply voltage-translating transceiver (3-state)	1.1 - 3.6	1.1 - 3.6	CMOS	±4	4.5	15	1	-40 to 125
74AUP1T50	Single supply voltage-translating buffer	2.3 - 3.6	n.a.	CMOS	±4	8.7	15	1	-40 to 125
74AUP1T57	Configurable gate with voltage-level translation	2.3 - 3.6	n.a.	CMOS	±4	3.8	15	1	-40 to 125
74AUP1T58	Configurable gate with voltage-level translation	2.3 - 3.6	n.a.	CMOS	±4	3.8	15	1	-40 to 125
74AUP1T86	Single supply 2-input voltage-translating XOR gate	2.3 - 3.6	n.a.	CMOS	±4	8.7	15	1	0
74AUP1T87	Single supply 2-input voltage-translating XNOR gate	2.3 - 3.6	n.a.	CMOS	±4	8.7	15	1	-40 to 125
74AUP1T97	Configurable gate with voltage-level translation	2.3 - 3.6	n.a.	CMOS	±4	3.8	15	1	-40 to 125
74AUP1T98	Configurable gate with voltage-level translation	2.3 - 3.6	n.a.	CMOS	±4	3.8	15	1	-40 to 125

## Voltage translators (level-shifters)

Types in **bold** represent new products

Type number	Description	V <sub>CC(A)</sub> (V)	V <sub>CC(B)</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	Number of bits	T <sub>amb</sub> (°C)
74AVC1T1004	1-to-4 fan-out buffer	0.8 - 3.6	n.a.	CMOS/ LVTTTL	±12	4.9	15	1	-40 to 125
74AVC1T8128	Single dual-supply translating 2-input NOR with enable	0.8 - 3.6	n.a.	CMOS/ LVTTTL	±12	2.4	15	1	-40 to 125
74AVC1T8832	Single dual-supply translating 2-input OR with strobe	0.8 - 3.6	n.a.	CMOS/ LVTTTL	±12	2.4	15	1	-40 to 125
74AVC16T245	16-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	30	16	-40 to 125
74AVC1T1022	1-to-4 fan out buffer	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	30	1	-40 to 125
74AVC1T45	Single dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	30	1	-40 to 125
74AVC20T245	20-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	3.5	30	20	-40 to 125
74AVC2T245	2-bit dual-supply voltage-translating transceiver	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	30	2	-40 to 125
74AVC2T45	Dual-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	30	2	-40 to 125
74AVC32T245	32-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	30	32	-40 to 125
74AVC4T245	4-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	30	4	-40 to 125
74AVC4T774	4-bit dual supply translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	3.5	15	4	-40 to 125
74AVC4T3144	4-bit dual-supply buffer/level-translator (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	3.5	15	4	-40 to 125
74AVC4TD245	4-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	30	4	-40 to 125
74AVC8T245	8-bit dual-supply voltage-translating transceiver (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	30	8	-40 to 125
74AVCH16T245	16-bit dual-supply voltage-translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	30	16	-40 to 125
74AVCH1T45	Single dual-supply voltage-translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	30	1	-40 to 125
74AVCH20T245	20-bit dual-supply voltage-translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	3.5	30	20	-40 to 125
74AVCH2T45	Dual-bit dual-supply voltage-translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	30	2	-40 to 125
74AVCH4T245	4-bit dual-supply voltage-translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS/ LVTTTL	±12	2.1	30	4	-40 to 125
74AVCH8T245	8-bit dual-supply voltage translating transceiver with bus hold (3-state)	0.8 - 3.6	0.8 - 3.6	CMOS	±12	2.1	15	8	-40 to 125
74AXP1T125	Dual-supply buffer/line driver (3-state)	0.7 - 2.75	1.2 - 5.5	CMOS	±12	4.8	50	1	-40 to 125
74AXP1T14	Dual-supply schmitt-trigger inverter	0.7 - 2.75	1.2 - 5.5	CMOS	±12	3.4	50	1	-40 to 125
74AXP1T32	Dual-supply 2-input or gate	0.7 - 2.75	1.2 - 5.5	CMOS	±12	3.4	50	1	-40 to 125
74AXP1T34	Single dual-supply voltage-translating buffer	0.7 - 2.75	1.2 - 5.5	CMOS	±12	3.4	50	1	-40 to 125
74AXP1T57	Schmitt-trigger inputs. Dual supply configurable multiple function gate	0.7 - 2.75	1.2 - 5.5	CMOS	±12	4.8	50	1	-40 to 85
74AXP2T08	Dual-supply 2-input AND gate	0.7 - 2.75	1.2 - 5.5	CMOS	±12	4.8	50	1	-40 to 125
74AXP2T3407	Dual-supply single buffer and single buffer with open drain	0.7 - 2.75	1.2 - 5.5	CMOS	±12	4.8	50	1	-40 to 125
<b>74AXP4T245</b>	4-bit dual supply translating transceiver; 3-state	0.9 - 5.5	0.9 - 5.5	CMOS	±12	9.1	50	4	-40 to 125
74HC4049	Hex inverter with 15 V-tolerant inputs	2.0 - 6.0	n.a.	CMOS	±5.2	8.0	50	6	-40 to 125
74HC4050	Hex buffer with 15 V-tolerant inputs	2.0 - 6.0	n.a.	CMOS	±5.2	7.0	50	6	-40 to 125
74LV1T00	Single supply 2-input translating NAND gate	1.6 - 5.5	n.a.	CMOS	±8	3.1	15	1	-40 to 125
74LV1T02	Single supply 2-input translating NOR gate	1.6 - 5.5	n.a.	CMOS	±8	3.1	15	1	-40 to 125
74LV1T04	Single supply translating inverter	1.6 - 5.5	n.a.	CMOS	±8	4.1	15	1	-40 to 125

## Voltage translators (level-shifters)

Types in **bold** represent new products

Type number	Description	V <sub>CC(A)</sub> (V)	V <sub>CC(B)</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	Number of bits	T <sub>amb</sub> (°C)
74LV1T08	Single supply 2-input translating AND gate	1.6 - 5.5	n.a.	CMOS	±8	4.1	15	1	-40 to 125
74LV1T32	Single supply 2-input translating OR gate	1.6 - 5.5	n.a.	CMOS	±8	3.2	15	1	-40 to 125
74LV1T34	Single supply translating buffer	1.6 - 5.5	n.a.	CMOS	±8	3.1	15	1	-40 to 125
74LV1T86	Single supply 2-input translating XOR gate	1.6 - 5.5	n.a.	CMOS	±8	3.4	15	1	-40 to 125
74LV1T87	Single supply 2-input translating XNOR gate	1.6 - 5.5	n.a.	CMOS	±8	3.4	15	1	-40 to 125
74LV1T125	Single supply translating buffer / line driver (3-state)	1.6 - 5.5	n.a.	CMOS	±8	3.2	15	1	-40 to 125
74LV1T126	Single supply translating buffer / line driver (3-state)	1.6 - 5.5	n.a.	CMOS	±8	2.9	15	1	-40 to 125
74LVC1T45	Single dual-supply voltage-translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	CMOS/ LVTTTL	±24	2.5	50	1	-40 to 125
74LVC2T45	Dual-bit dual-supply voltage-translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	CMOS/ LVTTTL	±24	2.5	50	2	-40 to 125
74LVC4245	8-bit dual-supply voltage-translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	CMOS/ LVTTTL	±24	3.5	50	8	-40 to 125
74LVC4245A	8-bit dual-supply voltage-translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	CMOS/ LVTTTL	±24	3.5	50	8	-40 to 125
74LVC8T245	8-bit dual-supply voltage-translating transceiver (3-state)	1.2 - 5.5	1.2 - 5.5	CMOS/ LVTTTL	±24	3.5	50	8	-40 to 125
74LVC8T595	Dual supply 8-bit serial-in/serial-out or parallel-out shift register; 3-state	1.1 - 5.5	1.1 - 5.5	CMOS/ LVTTTL	±24	4.1	15	8	-40 to 125
74LVCH1T45	Single dual-supply voltage-translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	CMOS/ LVTTTL	±24	2.5	50	1	-40 to 125
74LVCH2T45	Dual-bit dual-supply voltage-translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	CMOS/ LVTTTL	±24	2.5	50	2	-40 to 125
74LVCH8T245	8-bit dual-supply voltage-translating transceiver with bus hold (3-state)	1.2 - 5.5	1.2 - 5.5	CMOS/ LVTTTL	±24	3.5	50	8	-40 to 125
HEF4104B	Quad low-to-high voltage translator (3-state)	3.0 - 15	3.0 - 15	CMOS	±2.4	3.4	50	16	-40 to 85
<b>LSF0108</b>	8-bit bidirectional translator; open-drain; push-pull	0.95 - 5.0	0.95 - 5.0	CMOS	+64	1.5	30	8	-40 to 125
<b>NXB0104</b>	Dual supply translator; auto direction sensing (3-state)	1.2 - 3.6	1.65 - 5.5	CMOS	±0.02	4.9	15	4	-40 to 125
<b>NXS0104</b>	Dual supply translating transceiver; open drain; autosense	1.65 - 3.6	2.3 - 5.5	CMOS	-0.02/+1	4.1	15	4	-40 to 125

## Analog Switches

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	R <sub>ON</sub> (Ω)	R <sub>ON(FLAT)</sub> (Ω)	F <sub>(-3dB)</sub> (MHz)	T <sub>HD</sub> (%)	X <sub>talk</sub> (dB)	T <sub>amb</sub> (°C)
74AHC1G66	Single-pole, single-throw analog switch	2.0 - 5.5	CMOS	40	14	280	0.015		-40 to 125
74AHC1G66	Single-pole, single-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	40	14	280	0.015		-40 to 125
74HC1G66	Single-pole, single-throw analog switch	2.0 - 9.0	CMOS	105	23	200	0.02		-40 to 125
74HC2G66	Dual single-pole, single-throw analog switch	2.0 - 9.0	CMOS	105	23	200	0.02	-60	-40 to 125
74HC4016	Quad single-pole, single-throw analog switch	2.0 - 10	CMOS	300	80	160	0.4	-60	-40 to 125
74HC4051	Single-pole, octal-throw analog switch	2.0 - 10	CMOS	200	20	180	0.02		-40 to 125
74HC4052	Dual single-pole, quad-throw analog switch	2.0 - 10	CMOS	200	20	180	0.02	-60	-40 to 125
74HC4053	Triple single-pole, double-throw analog switch	2.0 - 10	CMOS	200	20	170	0.02		-40 to 125
74HC4066	Quad single-pole, single-throw analog switch	2.0 - 10	CMOS	105	23	200	0.02	-60	-40 to 125
74HC4067	Single-pole, 16-throw analog switch	2.0 - 10	CMOS	200	25	100	0.02		-40 to 125
74HC4316	Quad single-pole, single-throw analog switch with translation	2.0 - 10	CMOS	300	80	160	0.4	-60	-40 to 125

## Analog Switches

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	R <sub>ON</sub> (Ω)	R <sub>ON(FLAT)</sub> (Ω)	f <sub>(-3dB)</sub> (MHz)	T <sub>HD</sub> (%)	X <sub>talk</sub> (dB)	T <sub>amb</sub> (°C)
74HC4351	Single-pole, octal-throw analog switch with latch	2.0 - 10	CMOS	200	20	180	0.02		-40 to 125
74HC4851	Single-pole, octal-throw analog switch	2.0 - 10	CMOS	220					-40 to 125
74HC4852	Dual single-pole, quad-throw analog switch; TTL-enabled	2.0 - 10	CMOS	220					-40 to 125
74HCT1G66	Single-pole, single-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	118	23	180	0.04		-40 to 125
74HCT2G66	Dual single-pole, single-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	118	23	180	0.04	-60	-40 to 125
74HCT4051	Single-pole, octal-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	225	20	170	0.04		-40 to 125
74HCT4052	Dual single-pole, quad-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	225	20	170	0.04	-60	-40 to 125
74HCT4053	Triple single-pole, double-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	225	20	160	0.04		-40 to 125
74HCT4066	Quad single-pole, single-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	118	23	180	0.04	-60	-40 to 125
74HCT4067	Single-pole, 16-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	225	25	90	0.04		-40 to 125
74HCT4316	Quad single-pole, single-throw analog switch with translation; TTL-enabled	4.5 - 5.5	TTL	400	50	150	0.8	-60	-40 to 125
74HCT4351	Single-pole, octal-throw analog switch with latch; TTL-enabled	4.5 - 5.5	TTL	225	20	170	0.04		-40 to 125
74HCT4851	Single-pole, octal-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	240					-40 to 125
74HCT4852	Dual single-pole, quad-throw analog switch; TTL-enabled	4.5 - 5.5	TTL	240					-40 to 125
74LV4051	Single-pole, octal-throw analog switch	1.0 - 6.0	TTL	135	35	200	0.4	-60	-40 to 125
74LV4052	Dual single-pole, quad-throw analog switch	1.0 - 6.0	TTL	125	15	180	0.4	-60	-40 to 125
74LV4053	Triple single-pole, double-throw analog switch	1.0 - 6.0	TTL	150	30	180	0.4	-60	-40 to 125
74LV4066	Quad single-pole, single-throw analog switch	1.0 - 6.0	TTL	50	3.0	180	0.02	-60	-40 to 125
74LVC1G3157	Single-pole, double-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	300	0.078		-40 to 125
74LVC1G384	Single-pole, single-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	440	0.001		-40 to 125
74LVC1G53	Single-pole, double-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	300	0.078		-40 to 125
74LVC1G66	Single-pole, single-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	440	0.001		-40 to 125
74LVC2G3157	Dual single-pole, double-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	300	0.078	-54	-40 to 125
74LVC2G53	Single-pole, double-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	300	0.078		-40 to 125
74LVC2G66	Dual single-pole, single-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	440	0.005	-56	-40 to 125
74LVC4066	Quad single-pole, single-throw analog switch	1.65 - 5.5	CMOS/LVTTL	15	1.5	440	0.005	-58	-40 to 125
74LVCV2G66	Dual single-pole, single-throw analog switch; overvoltage tolerant	2.3 - 5.5	CMOS/LVTTL	15	3.0	210	0.01	-55	-40 to 125
HEF4016B	Quad single-pole, single-throw analog switch	3.0 - 15	CMOS	350	65	90	0.04	-50	-40 to 85
HEF4051B	Single-pole, octal-throw analog switch	3.0 - 15	CMOS	175	30	70	0.04	-50	-40 to 85
HEF4052B	Dual single-pole, quad-throw analog switch	3.0 - 15	CMOS	175	30	70	0.04	-50	-40 to 85
HEF4053B	Triple single-pole, double-throw analog switch	3.0 - 15	CMOS	175	30	70	0.04	-50	-40 to 85
HEF4066B	Quad single-pole, single-throw analog switch	3.0 - 15	CMOS	175	20	90	0.04	-50	-40 to 85
HEF4067B	Single-pole, 16-throw analog switch	3.0 - 15	CMOS	175	20	13	0.04	-50	-40 to 85

## Bus Switches

Type number	Description	V <sub>CC</sub> (V)	V <sub>PASS</sub> (V)	Logic switching levels	R <sub>ON</sub> (Ω)	f <sub>(-3dB)</sub> (MHz)	Number of bits	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)
74CB3Q3253	Dual 1-of-4 FET multiplexer/ demultiplexer with charge pump	2.3 - 3.6	V <sub>CC</sub>	CMOS/LVTTL	4	500	2	0.2	-40 to 85
74CB3Q3257	Quad 1-of-2 FET multiplexer/ demultiplexer with charge pump	2.3 - 3.6	V <sub>CC</sub>	CMOS/LVTTL	4	500	4	0.2	-40 to 85
74CBTLV16211	24-bit bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	10	0.2	-40 to 125
74CBTLV1G125	Single bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	1	0.2	-40 to 125
74CBTLV3125	Quad bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	4	0.2	-40 to 125
74CBTLV3126	Quad bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	4	0.2	-40 to 125
74CBTLV3244	Octal bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	8	0.2	-40 to 125
74CBTLV3245	Octal bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	8	0.2	-40 to 125
74CBTLV3253	Dual 4:1 mux/demux	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	2	0.2	-40 to 125
74CBTLV3257	Quad 2:1 mux/demux	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	4	0.2	-40 to 125
74CBTLV3306	2-bit bus switch	2.3 - 3.6	5.0	CMOS/LVTTL	7	400	2	0.2	-40 to 125
74CBTLV3384	10-bit bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	10	0.2	-40 to 125
74CBTLV3861	10-bit bus switch	2.3 - 3.6	3.3	CMOS/LVTTL	7	400	10	0.2	-40 to 125
74CBTLVD3244	Octal bus switch level translator	3.0 - 3.6	1.8	CMOS/LVTTL	7	400	8	0.2	-40 to 125
74CBTLVD3245	Octal bus switch level translator	3.0 - 3.6	1.8	CMOS/LVTTL	7	400	8	0.2	-40 to 125
74CBTLVD3384	10-bit bus switch level translator	3.0 - 3.6	1.8	CMOS/LVTTL	7	400	10	0.2	-40 to 125
74CBTLVD3861	10-bit bus switch level translator	3.0 - 3.6	1.8	CMOS/LVTTL	7	400	10	0.2	-40 to 125
CBT16210	20-bit bus switch	4.5 - 5.5	3.9	TTL	7	300	20	0.25	-40 to 85
CBT3125	Quad bus switch	4.5 - 5.5	3.9	TTL	7	300	4	0.25	-40 to 85
CBT3244A	Octal bus switch	4.5 - 5.5	3.9	TTL	7	300	8	0.25	-40 to 85
CBT3245A	Octal bus switch	4.5 - 5.5	3.9	TTL	7	300	8	0.25	-40 to 85
CBT3251	8:1 mux/demux	4.5 - 5.5	3.9	TTL	7	300	8	0.25	-40 to 85
CBT3253	Dual 4:1 mux/demux	4.5 - 5.5	3.9	TTL	7	300	2	0.25	-40 to 85
CBT3253A	Dual 4:1 mux/demux	4.5 - 5.5	3.9	TTL	7	300	2	0.25	-40 to 85
CBT3257A	Quad 2:1 mux/demux	4.5 - 5.5	3.9	TTL	7	300	4	0.25	-40 to 85
CBT3306	Dual bus switch	4.5 - 5.5	3.9	TTL	7	300	2	0.25	-40 to 85
CBT3861	10-bit bus switch	4.5 - 5.5	3.9	TTL	7	300	10	0.25	-40 to 85
CBTD16210	20-bit bus switch level translator	4.5 - 5.5	3.3	TTL	7	300	20	0.25	-40 to 85
CBTD3306	Dual bus switch level translator	4.5 - 5.5	3.3	TTL	7	300	2	0.25	-40 to 85
CBTD3384	10-bit bus switch level translator	4.5 - 5.5	3.3	TTL	7	300	10	0.25	-40 to 85
CBTD3861	10-bit bus switch level translator	4.5 - 5.5	3.3	TTL	7	300	10	0.25	-40 to 85

## Decoders/Demultiplexers

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	T <sub>amb</sub> (°C)
74AHC138	3-to-8 line decoder/demultiplexer; inverting	2.0 - 5.5	CMOS	±8	4.4	50	-40 to 125
74AHC139	Dual 2-to-4 line decoder/demultiplexer	2.0 - 5.5	CMOS	±8	3.9	50	-40 to 125
74AHCT138	3-to-8 line decoder/demultiplexer; inverting; TTL-enabled	4.5 - 5.5	TTL	±8	4.4	50	-40 to 125
74AHCT139	Dual 2-to-4 line decoder/demultiplexer; TTL-enabled	4.5 - 5.5	TTL	±8	3.6	50	-40 to 125
74AUP1G18	1-to-2 demultiplexer (3-state)	1.1 - 3.6	CMOS	±1.9	3.2	30	-40 to 125
74AUP1G19	1-to-2 decoder/demultiplexer	1.1 - 3.6	CMOS	±1.9	3.0	30	-40 to 125
74HC137	3-to-8 line decoder/demultiplexer with address latches; inverting	2.0 - 6.0	CMOS	±5.2	18	50	-40 to 125
74HC138	3-to-8 line decoder/demultiplexer; inverting	2.0 - 6.0	CMOS	±5.2	12	50	-40 to 125
74HC139	Dual 2-to-4 line decoder/demultiplexer	2.0 - 6.0	CMOS	±5.2	14	50	-40 to 125
74HC154	4-to-16 line decoder/demultiplexer	2.0 - 6.0	CMOS	±5.2	11	50	-40 to 125
74HC237	3-to-8 decoder/demultiplexer with address latches	2.0 - 6.0	CMOS	±5.2	18	50	-40 to 125
74HC238	3-to-8 decoder/demultiplexer	2.0 - 6.0	CMOS	±5.2	14	50	-40 to 125
74HC42	BCD to decimal decoder (1-of-10)	2.0 - 6.0	CMOS	±5.2	17	50	-40 to 125
74HC4511	BCD to 7-segment latch/decoder/driver with lamp test input	2.0 - 6.0	CMOS	-10	28	50	-40 to 125
74HC4514	4-to-16 decoder/demultiplexer with address latches	2.0 - 6.0	CMOS	±5.2	27	50	-40 to 125
74HC4515	4-to-16 decoder/demultiplexer with address latches; inverting	2.0 - 6.0	CMOS	±5.2	29	50	-40 to 125
74HCT138	3-to-8 line decoder/demultiplexer; inverting; TTL-enabled	4.5 - 5.5	TTL	±4	19	50	-40 to 125
74HCT139	Dual 2-to-4 line decoder/demultiplexer; TTL-enabled	4.5 - 5.5	TTL	±4	16	50	-40 to 125
74HCT154	4-to-16 line decoder/demultiplexer; TTL-enabled	4.5 - 5.5	TTL	±4	13	50	-40 to 125
74HCT238	3-to-8 decoder/demultiplexer; TTL-enabled	4.5 - 5.5	TTL	±4	18	50	-40 to 125
74HCT4511	BCD to 7-segment latch/decoder/driver with lamp test input; TTL-enabled	4.5 - 5.5	TTL	-10	28	50	-40 to 125
74HCT4514	4-to-16 decoder/demultiplexer with address latches; TTL-enabled	4.5 - 5.5	TTL	±4	30	50	-40 to 125
74LV138	3-to-8 line decoder/demultiplexer; inverting	1.0 - 5.5	TTL	±12	12	50	-40 to 125
74LVC138A	3-to-8 line decoder/demultiplexer; inverting	1.2 - 3.6	CMOS/LVTTL	±24	2.7	50	-40 to 125
74LVC139	Dual 2-to-4 line decoder/demultiplexer	1.2 - 3.6	CMOS/LVTTL	±24	2.5	50	-40 to 125
74LVC1G18	1-to-2 demultiplexer (3-state)	1.65 - 5.5	CMOS/LVTTL	±32	2.3	50	-40 to 125
74LVC1G19	1-to-2 decoder/demultiplexer	1.65 - 5.5	CMOS/LVTTL	±32	1.8	50	-40 to 125
HEF4028B	1-of-10 decoder	3.0 - 15.0	CMOS	±2.4	30	50	-40 to 85
HEF4543B	BCD to 7-segment latch/decoder/driver with phase input	3.0 - 15.0	CMOS	±2.4	55	50	-40 to 85
HEF4555B	Dual 1-to-4 line decoder/demultiplexer	3.0 - 15.0	CMOS	±2.4	30	50	-40 to 85

## Digital Multiplexers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	Output Load C <sub>L</sub> (pF)	t <sub>pd</sub> (ns)	T <sub>amb</sub> (°C)
74AHC157	Quad 2-input multiplexer	2.0 - 5.5	CMOS	±8	50	3.2	-40 to 125
74AHC257	Quad 2-input multiplexer (3-state)	2.0 - 5.5	CMOS	±8	50	2.9	-40 to 125
74AHCT157	Quad 2-input multiplexer; TTL-enabled	4.5 - 5.5	TTL	±8	50	3.2	-40 to 125
74AHCT257	Quad 2-input multiplexer; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	50	3.7	-40 to 125
74AUP1G157	Single 2-input multiplexer	1.1 - 3.6	CMOS	±1.9	30	3.2	-40 to 125
74AUP1G158	Single 2-input multiplexer; inverting	1.1 - 3.6	CMOS	±1.9	30	3.2	-40 to 125
74AUP2G157	Single 2-input multiplexer	1.1 - 3.6	CMOS	±1.9	30	3.4	-40 to 125
74AXP1G157	Single 2-input multiplexer	0.7 - 2.75	CMOS	±4.5	5	2.7	-40 to 85
74HC151	8-input multiplexer	2.0 - 6.0	CMOS	±5.2	50	17	-40 to 125
74HC153	Dual 4-input multiplexer	2.0 - 6.0	CMOS	±5.2	50	17	-40 to 125
74HC157	Quad 2-input multiplexer	2.0 - 6.0	CMOS	±5.2	50	11	-40 to 125
74HC158	Quad 2-input multiplexer; inverting	2.0 - 6.0	CMOS	±5.2	50	12	-40 to 125
74HC251	8-input multiplexer (3-state)	2.0 - 6.0	CMOS	±5.2	50	18	-40 to 125
74HC253	Dual 4-input multiplexer (3-state)	2.0 - 6.0	CMOS	±7.8	50	17	-40 to 125
74HC257	Quad 2-input multiplexer (3-state)	2.0 - 6.0	CMOS	±7.8	50	11	-40 to 125
74HCT151	8-input multiplexer; TTL-enabled	4.5 - 5.5	TTL	±4	50	19	-40 to 125
74HCT153	Dual 4-input multiplexer; TTL-enabled	4.5 - 5.5	TTL	±4	50	19	-40 to 125
74HCT157	Quad 2-input multiplexer; TTL-enabled	4.5 - 5.5	TTL	±4	50	13	-40 to 125
74HCT251	8-input multiplexer; TTL-enabled (3-state)	4.5 - 5.5	TTL	±4	50	22	-40 to 125
74HCT253	Dual 4-input multiplexer; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	17	-40 to 125
74HCT257	Quad 2-input multiplexer; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	50	13	-40 to 125
74LVC157A	Quad 2-input multiplexer	1.2 - 3.6	CMOS/LVTTL	±24	50	2.5	-40 to 125
74LVC1G157	Single 2-input multiplexer	1.65 - 5.5	CMOS/LVTTL	±32	50	2.2	-40 to 125
74LVC257A	Quad 2-input multiplexer (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	50	2.4	-40 to 125

## Shift Registers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74HC194	4-bit bidirectional parallel or serial-in/parallel-out shift register	2.0 - 6.0	CMOS	+/- 5.2	14	102	4	-40 to 125
74AHC164	8-bit serial-in/parallel-out shift register	2.0 - 5.5	CMOS	+/- 8	4.5	115	8	-40 to 125
74AHCT164	8-bit serial-in/parallel-out shift register; TTL enabled	4.5 - 5.5	TTL	+/- 8	3.4	115	8	-40 to 125
74AHC594	8-bit serial-in/parallel-out shift register with output storage register	2.0 - 5.5	CMOS	+/- 8	4.1	160	8	-40 to 125
74AHCT594	8-bit serial-in/parallel-out shift register with output storage register; TTL enabled	4.5 - 5.5	TTL	+/- 8	3.8	160	8	-40 to 125
74AHC595	8-bit serial-in/parallel-out shift register with output storage register (3-state)	2.0 - 5.5	CMOS	+/- 8	4	170	8	-40 to 125
74AHCT595	8-bit serial-in/parallel-out shift register with output storage register; TTL enabled (3-state)	4.5 - 5.5	TTL	+/- 8	3.8	170	8	-40 to 125
74HC299	8-bit universal shift register (3-state)	2.0 - 6.0	CMOS	+/- 7.8	19	54	8	-40 to 125



## Shift Registers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74HC164	8-bit serial-in/parallel-out shift register	2.0 - 6.0	CMOS	+/- 5.2	12	78	8	-40 to 125
74HCT164	8-bit serial-in/parallel-out shift register; TTL enabled	2.0 - 6.0	TTL	+/- 5.2	12	78	8	-40 to 125
74HC165	8-bit parallel or serial-in/serial-out shift register	2.0 - 6.0	CMOS	+/- 5.2	16	56	8	-40 to 125
74HCT165	8-bit parallel or serial-in/serial-out shift register; TTL enabled	4.5 - 5.5	TTL	+/- 4	14	48	8	-40 to 125
74HC166	8-bit parallel or serial-in/serial-out shift register	2.0 - 6.0	CMOS	+/- 5.2	15	63	8	-40 to 125
74HCT166	8-bit parallel or serial-in/serial-out shift register; TTL enabled	4.5 - 5.5	TTL	+/- 4.0	23	50	8	-40 to 125
74HC594	8-bit serial-in/parallel-out shift register with output storage register	2.0 - 6.0	CMOS	+/- 7.8	14	109	8	-40 to 125
74HCT594	8-bit serial-in/parallel-out shift register with output storage register; TTL enabled	4.5 - 5.5	TTL	+/- 6	15	100	8	-40 to 125
74HC595	8-bit serial-in/parallel-out shift register with output storage register (3-state)	2.0 - 6.0	CMOS	+/- 7.8	16	108	8	-40 to 125
74HCT595	8-bit serial-in/parallel-out shift register with output storage register; TTL enabled (3-state)	4.5 - 5.5	TTL	+/- 6	25	57	8	-40 to 125
74HC597	8-bit parallel or serial-in/parallel-out shift register with parallel input storage register	2.0 - 6.0	CMOS	+/- 5.2	16	108	8	-40 to 125
74HCT597	8-bit parallel or serial-in/parallel-out shift register with parallel input storage register; TTL enabled	4.5 - 5.5	TTL	+/- 4	20	83	8	-40 to 125
74HC4094	8-bit serial-in/serial or parallel-out shift register with output register (3-state)	2.0 - 6.0	CMOS	+/- 5.2	15	95	8	-40 to 125
74HCT4094	8-bit serial-in/serial or parallel-out shift register with output register; TTL enabled (3-state)	4.5 - 5.5	TTL	+/- 4	19	86	8	-40 to 125
74LV164	8-bit serial-in/parallel-out shift register	1.0 - 5.5	CMOS	+/- 12	12	78	8	-40 to 125
74LV165	8-bit parallel or serial-in/serial-out shift register	1.0 - 5.5	CMOS	+/- 12	18	78	8	-40 to 125
74LV165A	8-bit parallel or serial-in/serial-out shift register	1.0 - 5.5	CMOS	+/- 12	7.5	115	8	-40 to 125
74LV595	8-bit serial-in/parallel-out shift register with output storage register (3-state)	1.0 - 3.6	CMOS	+/- 8	15	77	8	-40 to 125
74LV4094	8-bit serial-in/serial or parallel-out shift register with output register (3-state)	1.0 - 3.6	CMOS	+/- 6	14	95	8	-40 to 125
74LVC594A	8-bit serial-in/parallel-out shift register with output storage register	1.2 - 5.5	CMOS/LVTTL	+/- 24	3.1	180	8	-40 to 125
74LVC595A	8-bit serial-in/parallel-out shift register with output storage register (3-state)	1.2 - 5.5	CMOS/LVTTL	+/- 24	4	180	8	-40 to 125
74LVC8T595	Dual supply 8-bit serial-in/serial-out or parallel-out shift register; 3-state	1.1 - 5.5	CMOS/LVTTL	±24	4.1	15	8	-40 to 125
74VHC595	8-bit serial-in/parallel-out shift register with output storage register (3-state)	2.0 - 5.5	CMOS	+/- 8	4	170	8	-40 to 125
74VHCT595	8-bit serial-in/parallel-out shift register with output storage register; TTL enabled (3-state)	4.5 - 5.5	TTL	+/- 8	3.8	170	8	-40 to 125
NPIC6C595	8-bit serial-in/parallel-out shift register with output storage register (3-state); open-drain	4.5 - 5.5	CMOS	100	90	10	8	-40 to 125
NPIC6C596	8-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state); open-drain	4.5 - 5.5	CMOS	100	90	10	8	-40 to 125
NPIC6C596A	8-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state); open-drain	2.3 - 5.5	CMOS	100	90	10	8	-40 to 125
NPIC6C4894	12-bit shift registers; open-drain	4.5 - 5.5	CMOS	100	90	10	12	-40 to 125
HEF4014B	8-bit shift register with synchronous parallel enable	4.5 - 15	CMOS	+/- 2.4	40	40	8	-40 to 85
HEF4015B	dual 4-bit serial-in/parallel-out shift register	4.5 - 15	CMOS	+/- 2.4	40	44	2	-40 to 85
HEF4021B	8-bit shift register with asynchronous parallel load	4.5 - 15	CMOS	+/- 2.4	40	40	8	-40 to 85
HEF4094B	8-bit serial-in/serial or parallel-out shift register with output register (3-state)	4.5 - 15	CMOS	+/- 2.4	50	28	8	-40 to 85
HEF4557B	1-to-64 bit shift register with variable length	4.5 - 15	CMOS	+/- 2.4	65	20	64	-40 to 85
HEF4794B	8-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	4.5 - 15	CMOS	-20	45	28	8	-40 to 85
HEF4894B	12-bit serial-in/serial or parallel-out shift register with output register LED driver (3-state)	4.5 - 15	CMOS	-20	45	28	12	-40 to 85

## Latches/Registered drivers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	Number of bits	T <sub>amb</sub> (°C)
74AHC373	Octal D-type transparent latch (3-state)	2.0 - 5.5	CMOS	±8	4.3	50	8	-40 to 125
74AHC573	Octal D-type transparent latch (3-state)	2.0 - 5.5	CMOS	±8	4.2	50	8	-40 to 125
74AHCT573	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	3.9	50	8	-40 to 125
74ALVC162334A	16-bit registered driver with 30 Ω termination resistors (3-state)	1.65 - 3.6	TTL	±24	6.0	50	16	-40 to 85
74ALVC162834A	18-bit registered driver with 30 Ω termination resistors (3-state)	1.65 - 3.6	TTL	±24	6.0	50	18	-40 to 85
74ALVC162835A	18-bit registered driver with 30 Ω termination resistors (3-state)	1.65 - 3.6	TTL	±24	6.0	50	18	-40 to 85
74ALVC162836A	20-bit registered driver with 30 Ω termination resistors (3-state)	1.65 - 3.6	TTL	±24	6.0	50	20	-40 to 85
74ALVC16834A	18-bit registered driver (3-state)	1.65 - 3.6	TTL	±24	4.0	50	18	-40 to 85
74ALVC16835A	18-bit registered driver (3-state)	1.65 - 3.6	TTL	±24	4.0	50	18	-40 to 85
74ALVC16836A	20-bit registered driver (3-state)	1.65 - 3.6	TTL	±24	4.0	50	20	-40 to 85
74ALVC373	Octal D-type transparent latch (3-state)	1.65 - 3.6	TTL	±24	2.2	50	8	-40 to 85
74ALVC573	Octal D-type transparent latch (3-state)	1.65 - 3.6	TTL	±24	2.2	50	8	-40 to 85
74ALVCH16373	16-bit D-type transparent latch with bus hold (3-state)	2.3 - 3.6	TTL	±24	2.1	50	16	-40 to 85
74ALVCH16841	20-bit D-type transparent latch with bus hold (3-state)	2.3 - 3.6	TTL	±24	2.4	50	20	-40 to 85
74ALVCH16843	18-bit D-type transparent latch with bus hold (3-state)	2.3 - 3.6	TTL	±24	2.1	50	18	-40 to 85
74ALVCH32973	16-bit transceiver and transparent D-type latch with 8 independent buffers	1.8 - 3.6	TTL	±24	2.5	50	16	-40 to 85
74ALVT16373	16-bit D-type transparent latch with bus hold (3-state)	2.3 - 3.6	TTL	-32 / 64	1.8	50	16	-40 to 85
74AUP1G373	Single D-type transparent latch (3-state)	1.1 - 3.6	CMOS	±1.9	8.5	30	1	-40 to 125
74AVC16334A	16-bit registered driver (3-state)	1.2 - 3.6	CMOS	±12	2.0	30	16	-40 to 85
74AVC16373	16-bit D-type transparent latch (3-state)	1.2 - 3.6	CMOS	±12	2.0	30	16	-40 to 85
74AVC16834A	18-bit registered driver (3-state)	1.2 - 3.6	CMOS	±12	2.0	30	18	-40 to 85
74AVC16835A	18-bit registered driver (3-state)	1.2 - 3.6	CMOS	±12	2.0	30	18	-40 to 85
74AVC16836A	20-bit registered driver (3-state)	1.2 - 3.6	CMOS	±12	2.0	30	20	-40 to 85
74HC259	8-bit addressable latch	2.0 - 6.0	CMOS	±5.2	18	50	8	-40 to 125
74HC373	Octal D-type transparent latch (3-state)	2.0 - 6.0	CMOS	±7.8	12	50	8	-40 to 125
74HC573	Octal D-type transparent latch (3-state)	2.0 - 6.0	CMOS	±7.8	14	50	8	-40 to 125
74HC75	Quad bistable transparent latch	2.0 - 6.0	CMOS	±5.2	11	50	4	-40 to 125
74HCT259	8-bit addressable latch; TTL-enabled	4.5 - 5.5	TTL	±4	20	50	8	-40 to 125
74HCT373	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	14	50	8	-40 to 125
74HCT573	Octal D-type transparent latch; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	17	50	8	-40 to 125
74LVC162373A	16-bit D-type transparent latch with 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/LVTTL	±12	3.2	50	16	-40 to 125
74LVC16373A	16-bit D-type transparent latch (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	3.0	50	16	-40 to 125
74LVC373A	Octal D-type transparent latch (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	3.0	50	8	-40 to 125
74LVC573A	Octal D-type transparent latch (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	3.4	50	8	-40 to 125
74LVCH162373A	16-bit D-type transparent latch with bus hold and 30 Ω termination resistors (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	3.2	50	16	-40 to 125
74LVCH16373A	16-bit D-type transparent latch with bus hold (3-state)	1.2 - 3.6	CMOS/LVTTL	±24	3.0	50	16	-40 to 125
74LVT162373	16-bit D-type transparent latch with bus hold and 30 Ω termination resistors (3-state)	2.7 - 3.6	TTL	±12	2.5	50	16	-40 to 85

## Latches/Registered drivers

Type number	Description	$V_{CC}$ (V)	Logic switching levels	Output drive capability (mA)	$t_{pd}$ (ns)	Output Load $C_L$ (pF)	Number of bits	$T_{amb}$ (°C)
74LVT16373A	16-bit D-type transparent latch with bus hold (3-state)	2.7 - 3.6	TTL	-32 / 64	1.9	50	16	-40 to 85
74LVT573	Octal D-type transparent latch (3-state)	2.7 - 3.6	TTL	-32 / 64	2.7	50	8	-40 to 85
HEF40373B	Octal D-type transparent latch (3-state)	3.0 - 15.0	CMOS	-50 / 62	40	50	8	-40 to 85
HEF4043B	Quad R/S latch with set and reset (3-state)	3.0 - 15.0	CMOS	±2.4	25	50	4	-40 to 85

## Flip-flops

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74AHC1G79	Single D-type flip-flop; positive-edge trigger	2.0 - 5.5	CMOS	±8	3.5	50	90	-40 to 125
74AHC273	Octal D-type flip-flop with reset; positive-edge trigger	2.0 - 5.5	CMOS	±8	4.2	50	165	-40 to 125
74AHC374	Octal D-type flip-flop; positive-edge trigger (3-state)	2.0 - 5.5	CMOS	±8	4.4	50	185	-40 to 125
74AHC377	Octal D-type flip-flop with data enable; positive-edge trigger	2.0 - 5.5	CMOS	±8	3.9	50	175	-40 to 125
74AHC574	Octal D-type flip-flop; positive-edge trigger (3-state)	2.0 - 5.5	CMOS	±8	4.4	50	130	-40 to 125
74AHC74	Dual D-type flip-flop with set and reset; positive-edge trigger	2.0 - 5.5	CMOS	±8	3.7	50	170	-40 to 125
74AHCT1G79	Single D-type flip-flop; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±8	3.5	50	90	-40 to 125
74AHCT273	Octal D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.0	50	120	-40 to 125
74AHCT374	Octal D-type flip-flop; positive-edge trigger (3-state)	4.5 - 5.5	TTL	±8	4.3	50	140	-40 to 125
74AHCT377	Octal D-type flip-flop with data enable; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±8	4.0	50	140	-40 to 125
74AHCT574	Octal D-type flip-flop; positive-edge trigger; TTL-enabled (3-state)	4.5 - 5.5	TTL	±8	4.4	50	130	-40 to 125
74AHCT74	Dual D-type flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±8	3.3	50	160	-40 to 125
74ALVC374	Octal D-type flip-flop; positive-edge trigger (3-state)	1.65 - 3.6	TTL	±24	2.5	50	300	-40 to 85
74ALVC574	Octal D-type flip-flop; positive-edge trigger (3-state)	1.65 - 3.6	TTL	±24	2.5	50	300	-40 to 85
74ALVC74	Dual D-type flip-flop with set and reset; positive-edge trigger	1.65 - 3.6	TTL	±24	2.3	50	425	-40 to 85
74ALVCH16374	16-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	1.2 - 3.6	TTL	±24	2.3	50	350	-40 to 85
74ALVCH16821	20-bit D-type flip-flop; positive-edge trigger (3-state)	2.3 - 3.6	TTL	±24	2.5	50	350	-40 to 85
74ALVCH16823	18-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	1.2 - 3.6	TTL	±24	2.1	50	350	-40 to 85
74ALVT162821	20-bit D-type flip-flop; positive-edge trigger (3-state)	2.3 - 3.6	TTL	±12	3.2	50	150	-40 to 85
74ALVT162823	18-bit buffer/line driver with bus hold and 30 Ω termination resistors (3-state)	2.3 - 3.6	TTL	±12	3.0	50	150	-40 to 85
74ALVT16821	20-bit D-type flip-flop; positive-edge trigger (3-state)	2.3 - 3.6	TTL	-32 / 64	1.8	50	150	-40 to 85
74ALVT16823	18-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	2.3 - 3.6	TTL	-32 / 64	1.9	50	250	-40 to 85
74AUP1G175	Single D flip-flop with reset; positive-edge trigger	1.1 - 3.6	CMOS	±1.9	7.4	30	70	-40 to 125
74AUP1G374	Single D-type flip-flop; positive-edge trigger (3-state)	1.1 - 3.6	CMOS	±1.9	7.9	30	400	-40 to 125
74AUP1G74	Single D-type flip-flop with set and reset; positive-edge trigger	1.1 - 3.6	CMOS	±1.9	9.2	30	400	-40 to 125
74AUP1G79	Single D-type flip-flop; positive-edge trigger	1.1 - 3.6	CMOS	±1.9	9.1	30	400	-40 to 125
74AUP1G80	Single D-type flip-flop; positive-edge trigger	1.1 - 3.6	CMOS	±1.9	9.1	30	400	-40 to 125
74AUP2G79	Dual D-type flip-flop; positive-edge trigger	1.1 - 3.6	CMOS	±1.9	8.5	30	400	-40 to 125
74AUP2G80	Dual D-type flip-flop; positive-edge trigger	1.1 - 3.6	CMOS	±1.9	9.1	30	400	-40 to 125
74AVC16374	16-bit D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	CMOS	±12	1.5	30	350	-40 to 85
74HC107	Dual JK-type flip-flop with reset; negative-edge trigger	2.0 - 6.0	CMOS	±5.2	16	50	78	-40 to 125
74HC109	Dual JK-type flip-flop with set and reset; positive-edge trigger	2.0 - 6.0	CMOS	±5.2	15	50	75	-40 to 125
74HC112	Dual JK-type flip-flop with set and reset; negative-edge trigger	2.0 - 6.0	CMOS	±5.2	15	50	66	-40 to 125
74HC173	Quad D-type flip-flop; positive-edge trigger (3-state)	2.0 - 6.0	CMOS	±7.8	17	50	88	-40 to 125
74HC174	Hex D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	CMOS	±5.2	17	50	99	-40 to 125
74HC175	Quad D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	CMOS	±5.2	17	50	83	-40 to 125
74HC273	Octal D-type flip-flop with reset; positive-edge trigger	2.0 - 6.0	CMOS	±5.2	15	50	122	-40 to 125

## Flip-Flops

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74HC374	Octal D-type flip-flop; positive-edge trigger (3-state)	2.0 - 6.0	CMOS	±7.8	14	50	83	-40 to 125
74HC377	Octal D-type flip-flop with data enable; positive-edge trigger	2.0 - 6.0	CMOS	±7.8	13	50	83	-40 to 125
74HC574	Octal D-type flip-flop; positive-edge trigger (3-state)	2.0 - 6.0	CMOS	±7.8	14	50	133	-40 to 125
74HC73	Dual JK-type flip-flop with reset; negative-edge trigger	2.0 - 6.0	CMOS	±5.2	16	50	77	-40 to 125
74HC74	Dual D-type flip-flop with set and reset; positive-edge trigger	2.0 - 6.0	CMOS	±5.2	14	50	82	-40 to 125
74HCT107	Dual JK-type flip-flop with reset; negative-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±4	16	50	73	-40 to 125
74HCT109	Dual JK-type flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±4	17	50	61	-40 to 125
74HCT112	Dual JK-type flip-flop with set and reset; negative-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±4	19	50	70	-40 to 125
74HCT173	Quad D-type flip-flop; positive-edge trigger; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	17	50	88	-40 to 125
74HCT174	Hex D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±4	18	50	69	-40 to 125
74HCT175	Quad D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±4	16	50	54	-40 to 125
74HCT273	Octal D-type flip-flop with reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±4	15	50	36	-40 to 125
74HCT374	Octal D-type flip-flop; positive-edge trigger; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	13	50	48	-40 to 125
74HCT377	Octal D-type flip-flop with data enable; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±6	14	50	53	-40 to 125
74HCT574	Octal D-type flip-flop; positive-edge trigger; TTL-enabled (3-state)	4.5 - 5.5	TTL	±6	15	50	76	-40 to 125
74HCT74	Dual D-type flip-flop with set and reset; positive-edge trigger; TTL-enabled	4.5 - 5.5	TTL	±4	15	50	59	-40 to 125
74LV74	Dual D-type flip-flop with set and reset; positive-edge trigger	1.0 - 5.5	TTL	±12	11	50	75	-40 to 125
74LVC16374A	16-bit D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	CMOS/ LVTTTL	±24	3.8	50	150	-40 to 125
74LVC1G175	Single D flip-flop with reset; positive-edge trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	3.1	50	300	-40 to 125
74LVC1G74	Single D-type flip-flop with set and reset; positive-edge trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	3.5	50	280	-40 to 125
74LVC1G79	Single D-type flip-flop; positive-edge trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	2.2	50	450	-40 to 125
74LVC1G80	Single D-type flip-flop; positive-edge trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	2.4	50	450	-40 to 125
74LVC273	Octal D-type flip-flop with reset; positive-edge trigger	1.2 - 3.6	CMOS/ LVTTTL	±24	6.0	50	230	-40 to 125
74LVC2G74	Single D-type flip-flop with set and reset; positive-edge trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	3.5	50	280	-40 to 125
74LVC374A	Octal D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	CMOS/ LVTTTL	±24	2.7	50	100	-40 to 125
74LVC377	Octal D-type flip-flop with data enable; positive-edge trigger	1.2 - 3.6	CMOS/ LVTTTL	±24	6.0	50	230	-40 to 125
74LVC574A	Octal D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	CMOS/ LVTTTL	±24	3.2	50	150	-40 to 125
74LVC74A	Dual D-type flip-flop with set and reset; positive-edge trigger	1.2 - 3.6	CMOS/ LVTTTL	±24	2.5	50	250	-40 to 125
74LVC823A	9-bit D-type flip-flop; positive-edge trigger (3-state)	1.2 - 3.6	CMOS/ LVTTTL	±24	5.4	50	150	-40 to 125
74LVCH162374A	16-bit D-type flip-flop with bus hold and 30 Ω termination resistors; positive-edge trigger (3-state)	1.2 - 3.6	CMOS/ LVTTTL	±24	3.8	50	150	-40 to 125
74LVCH16374A	16-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	1.2 - 3.6	CMOS/ LVTTTL	±24	3.8	50	150	-40 to 125
74LVT162374	16-bit D-type flip-flop with bus hold and 30 Ω termination resistors; positive-edge trigger (3-state)	2.7 - 3.6	TTL	±12	3.0	50	150	-40 to 85
74LVT16374A	16-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	2.7 - 3.6	TTL	-32 / 64	3.0	50	150	-40 to 85
74LVTH16374A	16-bit D-type flip-flop with bus hold; positive-edge trigger (3-state)	2.7 - 3.6	TTL	-32 / 64	3.0	50	150	-40 to 85
HEF4013B	Dual D-type flip-flop with set and reset; positive-edge trigger	3.0 - 15.0	CMOS	±2.4	30	50	40	-40 to 85
HEF40175B	Quad D-type flip-flop with reset; positive-edge trigger	3.0 - 15.0	CMOS	±2.4	25	50	45	-40 to 85
HEF4027B	Dual JK-type flip-flop	3.0 - 15.0	CMOS	±2.4	30	50	30	-40 to 85

## FIFO registers

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74HC40105	4-bit x 16-word FIFO register	2.0 - 6.0	CMOS	±5.2	15	50	30	-40 to 125

## Counters/frequency dividers

Types in **bold** represent new products

Type number	Description	V <sub>cc</sub> (V)	Output drive capability (mA)	Logic switching levels	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
<b>74AHC1G4208</b>	08-stage divider and oscillator	2.0 - 5.5	±8	CMOS	14	15	165	-40 to 125
74AHC1G4210	10-stage divider and oscillator	2.0 - 5.5	±5.2	CMOS	17	15	125	-40 to 125
74AHC1G4212	12-stage divider and oscillator	2.0 - 5.5	±5.2	CMOS	20	15	125	-40 to 125
74AHC1G4214	14-stage divider and oscillator	2.0 - 5.5	±5.2	CMOS	23	15	125	-40 to 125
<b>74AHC1G4215</b>	14-stage divider and oscillator	2.0 - 5.5	± 8	CMOS	24	15	165	-40 to 125
74HC160	Presetable synchronous BCD decade counter; asynchronous reset	2.0 - 6.0	±5.2	CMOS	18	50	55	-40 to 125
74HC161	Presetable synchronous 4-bit binary counter; asynchronous reset	2.0 - 6.0	±5.2	CMOS	19	50	48	-40 to 125
74HCT161	Presetable synchronous 4-bit binary counter; asynchronous reset; TTL-enabled	4.5 - 5.5	±4.0	TTL	20	50	41	-40 to 125
74HCT163	Presetable synchronous 4-bit binary counter; synchronous reset; TTL-enabled	4.5 - 5.5	±4.0	TTL	20	50	50	-40 to 125
74HC191	Presetable synchronous 4-bit binary up/down counter	2.0 - 6.0	±5.2	CMOS	22	50	36	-40 to 125
74HC193	Presetable synchronous 4-bit binary up/down counter; separate up/down clocks	2.0 - 6.0	±5.2	CMOS	20	50	49	-40 to 125
74HCT193	Presetable synchronous 4-bit binary up/down counter; separate up/down clocks; TTL-enabled	4.5 - 5.5	±4.0	TTL	20	50	43	-40 to 125
74HC390	Dual decade ripple counter	2.0 - 6.0	±5.2	CMOS	14	50	60	-40 to 125
74HCT390	Dual decade ripple counter; TTL-enabled	4.5 - 5.5	±4.0	TTL	18	50	55	-40 to 125
74HC393	Dual 4-bit binary ripple counter	2.0 - 6.0	±5.2	CMOS	12	50	107	-40 to 125
74HCT393	Dual 4-bit binary ripple counter; TTL-enabled	4.5 - 5.5	±4.0	TTL	20	50	53	-40 to 125
74HC4017	Johnson decade counter with 10 decoded outputs	2.0 - 6.0	±5.2	CMOS	18	50	77	-40 to 125
74HCT4017	Johnson decade counter with 10 decoded outputs; TTL-enabled	4.5 - 5.5	±4.0	TTL	21	50	67	-40 to 125
74HC4020	14-stage binary ripple counter	2.0 - 6.0	±5.2	CMOS	11	50	52	-40 to 125
74HCT4020	14-stage binary ripple counter; TTL-enabled	4.5 - 5.5	±4.0	TTL	15	50	52	-40 to 125
74HC4040	12-stage binary ripple counter	2.0 - 6.0	±5.2	CMOS	14	50	90	-40 to 125
74HCT4040	12-stage binary ripple counter; TTL-enabled	4.5 - 5.5	±4.0	TTL	16	50	79	-40 to 125
74HC4060	14-stage binary ripple counter with oscillator	2.0 - 6.0	±5.2	CMOS	31	50	95	-40 to 125
74HCT4060	14-stage binary ripple counter with oscillator; TTL-enabled	4.5 - 5.5	±4.0	TTL	31	50	88	-40 to 125
74HC4520	Dual 4-bit synchronous binary counter	2.0 - 6.0	±5.2	CMOS	24	50	64	-40 to 125
74HCT4520	Dual 4-bit synchronous binary counter; TTL-enabled	4.5 - 5.5	±4.0	TTL	24	50	64	-40 to 125
74HC5555	Programmable delay timer with oscillator	2.0 - 6.0	-0.8	CMOS	89	50	24	-40 to 125
74HC6323	Programmable ripple counter with oscillator (3-state)	2.0 - 6.0	±7.8	CMOS	17	50	100	-40 to 125
74HCT6323	Programmable ripple counter with oscillator (3-state); TTL-enabled	4.5 - 5.5	±4.0	TTL	17	50	85	-40 to 125
74HC40103	8-bit synchronous binary down counter	2.0 - 6.0	±5.2	CMOS	15	50	14	-40 to 125
74HC4024	7-stage binary ripple counter	2.0 - 6.0	±5.2	CMOS	14	50	90	-40 to 125
74HC590	8-bit binary counter with output register (3-state)	2.0 - 6.0	±5.2	CMOS	19	50	61	-40 to 125
74LV393	Dual 4-bit binary ripple counter	1.0 - 3.6	±6	TTL	12	50	90	-40 to 125
74LV4020	14-stage binary ripple counter	1.0 - 5.5	±6	TTL	16	50	100	-40 to 125
74LV4060	14-stage binary ripple counter with oscillator	1.0 - 5.5	±6	TTL	29	50	100	-40 to 125

## Counters/frequency dividers

Type number	Description	V <sub>cc</sub> (V)	Output drive capability (mA)	Logic switching levels	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74LVC161	Presetable synchronous 4-bit binary counter; asynchronous reset	1.2 - 3.6	±24	CMOS/LVTTL	4.9	50	200	-40 to 125
74LVC163	Presetable synchronous 4-bit binary counter; synchronous reset	1.2 - 3.6	±24	CMOS/LVTTL	4.9	50	200	-40 to 125
HEF4017B	Johnson decade counter with 10 decoded outputs	3.0 - 15	±2.4	CMOS	40	50	30	-40 to 85
HEF4020B	14-stage binary ripple counter	3.0 - 15	±2.4	CMOS	35	50	35	-40 to 85
HEF4024B	7-stage binary ripple counter	3.0 - 15	±2.4	CMOS	30	50	35	-40 to 85
HEF4040B	12-stage binary ripple counter	3.0 - 15	±2.4	CMOS	35	50	50	-40 to 85
HEF4060B	14-stage binary ripple counter with oscillator	3.0 - 15	±2.4	CMOS	50	50	30	-40 to 85
HEF4518B	Dual BCD counter	3.0 - 15	±2.4	CMOS	40	50	40	-40 to 85
HEF4520B	Dual 4-bit synchronous binary counter	3.0 - 15	±2.4	CMOS	15	50	40	-40 to 85
HEF4521B	24-stage frequency divider and oscillator	3.0 - 15	±2.4	CMOS	220	50	35	-40 to 85
HEF4541B	Programmable timer	3.0 - 15	- 4/ 2.7	CMOS	38	50	150	-40 to 85

## Multivibrators

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	T <sub>amb</sub> (°C)
74AHC123A	Dual retriggerable monostable multivibrator with reset	2.0 - 5.5	CMOS	±8	5.1	50	-40 to 125
74AHC123A	Dual retriggerable monostable multivibrator with reset; TTL-enabled	4.5 - 5.5	TTL	±8	5.0	50	-40 to 125
74HC123	Dual retriggerable monostable multivibrator with reset	2.0 - 6.0	CMOS	±7.8	9.0	50	-40 to 125
74HCT123	Dual retriggerable monostable multivibrator with reset; TTL-enabled	4.5 - 5.5	TTL	±4	26	50	-40 to 125
74HCT221	dual non-retriggerable monostable multivibrator with reset; TTL-enabled	4.5 - 5.5	TTL	±4	32	50	-40 to 125
74HC423	Dual retriggerable monostable multivibrator with reset	2.0 - 6.0	CMOS	±5.2	23	50	-40 to 125
74HCT423	Dual retriggerable monostable multivibrator with reset; TTL-enabled	4.5 - 5.5	TTL	±4	26	50	-40 to 125
74HC4538	Dual retriggerable precision monostable multivibrator	2.0 - 6.0	CMOS	±5.2	27	50	-40 to 125
74HCT4538	Dual retriggerable precision monostable multivibrator; TTL-enabled	4.5 - 5.5	TTL	±4	30	50	-40 to 125
74LV123	Dual retriggerable monostable multivibrator with reset	1.0 - 5.5	TTL	±12	20	50	-40 to 125
74LVC1G123	Single retriggerable monostable multivibrator	1.65 - 5.5	CMOS/LVTTL	±32	3.5	50	-40 to 125
HEF4047B	Monostable/astable multivibrator	3.0 - 15	CMOS	±2.4	50	50	-40 to 85
HEF4528B	Dual retriggerable monostable multivibrator with reset	3.0 - 15	CMOS	±2.4	40	50	-40 to 85
HEF4538B	Dual retriggerable precision monostable multivibrator	3.0 - 15	CMOS	±2.4	60	50	-40 to 85

## Phase-locked loops

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	F <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74HC4046A	Phase-locked loop with VCO	3.0 - 6.0	CMOS	±5.2	18	50	21	-40 to 125
74HCT4046A	Phase-locked loop with VCO; TTL-enabled	4.5 - 5.5	TTL	±4	23	50	19	-40 to 125
74HCT9046A	Phase-locked loop with bandgap controlled VCO; TTL-enabled	4.5 - 5.5	TTL	±4	23	50	19	-40 to 125
HEF4046B	Phase-locked loop with VCO	3.0 - 15.0	CMOS	±2.4		50	2.7	-40 to 125

## AND Gates

Types in **bold** represent new products

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74ABT08	Quad 2-input AND gate	4.5 - 5.5	TTL	-15 / 20	2.4	50	100	4	-40 to 85
74AHC08	Quad 2-input AND gate	2.0 - 5.5	CMOS	±8	3.5	50	60	4	-40 to 125
74AHC1G08	Single 2-input AND gate	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125
74AHC1G09	Single 2-input AND gate; open drain	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125
74AHC2G08	Dual 2-input AND gate	2.0 - 5.5	CMOS	±8	3.2	50	60	2	-40 to 125
74AHCT08	Quad 2-input AND gate; TTL-enabled	4.5 - 5.5	TTL	±8	5.0	50	60	4	-40 to 125
74AHCT1G08	Single 2-input AND gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.6	50	60	1	-40 to 125
74AHCT2G08	Dual 2-input AND gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.6	50	60	2	-40 to 125
74ALVC08	Quad 2-input AND gate	1.65 - 3.6	CMOS/ LVTTTL	±24	2.0	50	145	4	-40 to 85
74AUP1G08	Single 2-input AND gate	1.1 - 3.6	CMOS	±1.9	8.2	30	70	1	-40 to 125
74AUP1G09	Single 2-input AND gate; open drain	1.1 - 3.6	CMOS	1.9	8.5	30	70	1	-40 to 125
74AUP1G11	Single 3-input AND gate	1.1 - 3.6	CMOS	±1.9	6.9	30	70	1	-40 to 125
74AUP1T08	Single supply 2-input voltage-translating AND gate	2.3 - 3.6	CMOS	±4	3.6	15	70	1	-40 to 125
74AUP2G08	Dual 2-input AND gate	1.1 - 3.6	CMOS	±1.9	8.2	30	70	2	-40 to 125
74AXP1G08	Single 2-input AND gate	0.7 - 2.75	CMOS	±4.5	2.6	5	70	1	-40 to 85
74AXP1G09	Single 2-input AND gate with open-drain output	0.7 - 2.75	CMOS	±4.5	2.6	5	70	1	-40 to 85
74AXP1G11	Single 3-input AND gate	0.7 - 2.75	CMOS	±4.5	2.6	5	70	1	-40 to 85
74HC08	Quad 2-input AND gate	2.0 - 6.0	CMOS	±5.2	7.0	50	36	4	-40 to 125
74HC11	Triple 3-input AND gate	2.0 - 6.0	CMOS	±5.2	10	50	36	3	-40 to 125
74HC1G08	Single 2-input AND gate	2.0 - 6.0	CMOS	±5.2	7.0	50	36	1	-40 to 125
74HC21	Dual 4-input AND gate	2.0 - 6.0	CMOS	±5.2	10	50	36	2	-40 to 125
74HC2G08	Dual 2-input AND gate	2.0 - 6.0	CMOS	±5.2	9.0	50	36	2	-40 to 125
74HCT08	Quad 2-input AND gate; TTL-enabled	4.5 - 5.5	TTL	±4	11	50	36	4	-40 to 125
74HCT11	Triple 3-input AND gate	4.5 - 5.5	TTL	±4	11	50	36	3	-40 to 125
74HCT1G08	Single 2-input AND gate; TTL-enabled	4.5 - 5.5	TTL	±2	11	50	36	1	-40 to 125
74HCT2G08	Dual 2-input AND gate; TTL-enabled	4.5 - 5.5	TTL	±4	14	50	36	2	-40 to 125
74LV08	Quad 2-input AND gate	1.0 - 5.5	TTL	±12	7.0	50	30	4	-40 to 125
<b>74LV08A</b>	Quad 2-input AND gate	2.0 - 5.5	CMOS	±12	4.3	15	45	4	-40 to 125
74LV1T08	Single supply 2-input translating AND gate	1.6 - 5.5	CMOS	±8	13.4	15	60	1	-40 to 125
74LVC08A	Quad 2-input AND gate	1.2 - 3.6	CMOS/ LVTTTL	±24	2.1	50	150	4	-40 to 125
74LVC11	Triple 3-input AND gate	1.2 - 3.6	CMOS/ LVTTTL	±24	3.7	50	150	3	-40 to 125
74LVC1G08	Single 2-input AND gate	1.65 - 5.5	CMOS/ LVTTTL	±24	2.1	50	150	1	-40 to 125
74LVC1G11	Single 3-input AND gate	1.65 - 5.5	CMOS/ LVTTTL	±24	2.6	50	150	1	-40 to 125
74LVC2G08	Dual 2-input AND gate	1.65 - 5.5	CMOS/ LVTTTL	±24	2.1	50	150	2	-40 to 125
74LVT08	Quad 2-input AND gate	2.7 - 3.6	TTL	-20 / 32	3.4	50	150	4	-40 to 85
74VHC08	Quad 2-input AND gate	2.0 - 5.5	CMOS	±8	3.5	50	60	4	-40 to 125
74VHCT08	Quad 2-input AND gate; TTL-enabled	4.5 - 5.5	TTL	±8	5.0	50	60	4	-40 to 125
HEF4073B	Triple 3-input AND gate	3.0 - 15	CMOS	±2.4	20	50	10	3	-40 to 85
HEF4081B	Quad 2-input AND gate	3.0 - 15	CMOS	±2.4	20	50	10	4	-40 to 85
HEF4082B	Dual 4-input AND gate	3.0 - 15	CMOS	±2.4	25	50	10	2	-40 to 85
XC7SET08	Single 2-input AND gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.6	50	60	1	-40 to 125
XC7SH08	Single 2-input AND gate	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125



## Combination Gates

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74AUP1G0832	Single 3-input AND-OR gate	1.1 - 3.6	CMOS	±1.9	6.7	30	70	1	-40 to 125
74AUP1G3208	Single 3-input OR-AND gate	1.1 - 3.6	CMOS	±1.9	7.4	30	70	1	-40 to 125
74AUP1G885	Dual function gate	1.1 - 3.6	CMOS	±1.9	7.6	30	70	1	-40 to 125
74AUP1Z04	Crystal driver with enable and internal resistor	1.1 - 3.6	CMOS	±1.9	5.6	30	70	1	-40 to 125
74AUP1Z125	Crystal driver with enable and internal resistor (3-state)	1.1 - 3.6	CMOS	±1.9	4.7	30	70	1	-40 to 125
74AUP2G0604	Inverter with open drain and inverter	1.1 - 3.6	CMOS	±1.9	4.0	30	70	2	-40 to 125
74AUP2G3404	Buffer and inverter	1.1 - 3.6	CMOS	±1.9	4.0	30	70	2	-40 to 125
74AUP2G3407	Buffer and buffer with open drain	1.1 - 3.6	CMOS	±1.9	4.1	30	70	2	-40 to 125
74AUP3G0434	Dual inverter and single buffer	1.1 - 3.6	CMOS	±1.9	4.0	30	70	3	-40 to 125
74AUP3G3404	Dual buffer and single inverter	1.1 - 3.6	CMOS	±1.9	4.0	30	70	3	-40 to 125
74LVC1GX04	Crystal driver	1.65 - 5.5	CMOS/ LVTTTL	±24	2.8	50	150	1	-40 to 125
HEF4007UB	Dual complementary paIR and inverter	3.0 - 15	CMOS	±3.4	15	50	10	2	-40 to 85

## Configurable Gates

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74AUP1G57	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	1	-40 to 125
74AUP1G58	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	1	-40 to 125
74AUP1G97	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.7	30	70	1	-40 to 125
74AUP1G98	Configurable gate; Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	8.9	30	70	1	-40 to 125
74AUP1G3208	Configurable multiple function gate	0.8 - 3.6	CMOS	±4	6.6	30	70	1	-40 to 125
74AUP1T57	Configurable gate with voltage-level translation	2.3 - 3.6	CMOS	±4	3.8	15	70	1	-40 to 125
74AUP1T58	Configurable gate with voltage-level translation	2.3 - 3.6	CMOS	±4	3.8	15	70	1	-40 to 125
74AUP1T97	Configurable gate with voltage-level translation	2.3 - 3.6	CMOS	±4	3.8	15	70	1	-40 to 125
74AUP1T98	Configurable gate with voltage-level translation	2.3 - 3.6	CMOS	±4	3.8	15	70	1	-40 to 125
74AUP2G57	Dual configurable gate; Schmitt-trigger	0.8 - 3.6	CMOS	±4	6.6	30	70	1	-40 to 125
74AUP2G58	Dual configurable gate; Schmitt-trigger	0.8 - 3.6	CMOS	±4	6.6	30	70	1	-40 to 125
74AUP2G97	Dual configurable gate; Schmitt-trigger	0.8 - 3.6	CMOS	±4	6.6	30	70	1	-40 to 125
74AUP2G98	Dual configurable gate; Schmitt-trigger	0.8 - 3.6	CMOS	±4	6.6	30	70	1	-40 to 125
74AXP1G57	Configurable gate; Schmitt-trigger	0.7 - 2.75	CMOS	±4.5	4.6	5	70	1	-40 to 85
74AXP1G58	Configurable gate; Schmitt-trigger	0.7 - 2.75	CMOS	±4.5	4.5	5	70	1	-40 to 85
74AXP1G97	Configurable gate; Schmitt-trigger	0.7 - 2.75	CMOS	±4.5	4.5	5	70	1	-40 to 85
74AXP1G98	Configurable gate; Schmitt-trigger	0.7 - 2.75	CMOS	±4.5	4.5	5	70	1	-40 to 85
74LVC1G57	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G58	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G97	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G98	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	6.3	50	150	1	-40 to 125
74LVC1G99	Configurable gate; Schmitt-trigger	1.65 - 5.5	CMOS/ LVTTTL	±32	8.4	50	150	1	-40 to 125

## EXCLUSIVE-NOR Gates

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	T <sub>amb</sub> (°C)
74AUP1T87	Single supply 2-input translating EXCLUSIVE-NOR gate	2.3 - 3.6	CMOS	±4	3.9	15	70	-40 to 125
74LV1T87	Single supply 2-input translating EXCLUSIVE-NOR gate	1.6 - 5.5	CMOS	±8	15.8	15	60	-40 to 125
HEF4077	Quad 2-input EXCLUSIVE-NOR gate	3.0 - 15	CMOS	±2.4	30	50	10	-40 to 85

## EXCLUSIVE-OR Gates

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74AHC1G86	2-input EXCLUSIVE-OR gate	2.0 - 5.5	CMOS	±8	3.4	50	60	1	-40 to 125
74AHCT1G86	2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.5	50	60	1	-40 to 125
74AHC86	Quad 2-input EXCLUSIVE-OR gate	2.0 - 5.5	CMOS	±8	3.4	50	60	4	-40 to 125
74AHCT86	Quad 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.4	50	60	4	-40 to 125
74AUP1G386	Single 3-input EXCLUSIVE-OR gate	1.1 - 3.6	CMOS	±1.9	8.6	30	70	1	-40 to 125
74AUP1G86	Single 2-input Exclusive-OR gate	1.1 - 3.6	CMOS	±1.9	9.0	30	70	1	-40 to 125
74AUP1T86	Single supply 2-input translating EXCLUSIVE-OR gate	2.3 - 3.6	CMOS	±1.9	3.8	15	70	1	-40 to 125
74AUP2G86	Dual 2-input EXCLUSIVE-OR gate	1.1 - 3.6	CMOS	±1.9	9.0	30	70	2	-40 to 125
74AXP1G86	Single 2-input Exclusive-OR gates	0.7 - 2.75	CMOS	±4.5	4.5	5	70	1	-40 to 85
74HC1G86	Single 2-input EXCLUSIVE-OR gate	2.0 - 6.0	CMOS	±2.6	9.0	50	36	1	-40 to 125
74HCT1G86	Single 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	TTL	±2.0	10	50	36	1	-40 to 125
74HC2G86	Dual 2-input EXCLUSIVE-OR gate	2.0 - 6.0	CMOS	±5.2	9.0	50	36	2	-40 to 125
74HCT2G86	Dual 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	TTL	±4.0	11	50	36	2	-40 to 125
74HC86	Quad 2-input EXCLUSIVE-OR gate	2.0 - 6.0	CMOS	±5.2	11	50	36	4	-40 to 125
74HCT86	Quad 2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	TTL	±4	14	50	36	4	-40 to 125
74LV1T86	Single supply 2-input translating EXCLUSIVE-OR gate	1.6 - 5.5	CMOS	±8	13.3	15	60	1	-40 to 125
74LVC1G386	Single 3-Input EXCLUSIVE-OR gate	1.65 - 5.5	CMOS/ LVTTTL	±32	4.5	50	150	1	-40 to 125
74LVC1G86	Single 2-input EXCLUSIVE-OR gate	1.65 - 5.5	CMOS/ LVTTTL	±32	2.4	50	150	1	-40 to 125
74LVC2G86	Dual 2-input EXCLUSIVE-OR gate	1.65 - 5.5	CMOS/ LVTTTL	±32	2.3	50	150	2	-40 to 125
74LVC86	Quad 2-input EXCLUSIVE-OR gate	1.2 - 3.6	CMOS/ LVTTTL	±24	3.0	50	150	4	-40 to 125
HEF4030B	Quad 2-input EXCLUSIVE-OR gate	3.0 - 15	CMOS	±2.4	30	50	10	4	-40 to 85
HEF4070B	Quad 2-input EXCLUSIVE-OR gate	3.0 - 15	CMOS	±2.4	30	50	10	4	-40 to 85
XC7SET86	2-input EXCLUSIVE-OR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.5	50	60	1	-40 to 125
XC7SH86	2-input EXCLUSIVE-OR gate	2.0 - 5.5	CMOS	±8	3.4	50	60	1	-40 to 125

## NAND Gates

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74ABT00	Quad 2-input NAND gate	4.5 - 5.5	TTL	-15 / 20	2.5	50	100	4	-40 to 85
74ABT20	Dual 4-input NAND gate	4.5 - 5.5	TTL	-15 / 20	2.7	50	100	2	-40 to 85
74AHC00	Quad 2-input NAND gate	2.0 - 5.5	CMOS	±8	3.2	50	60	4	-40 to 125
74AHC132	Quad 2-input NAND gate Schmitt-trigger	2.0 - 5.5	CMOS	±8	3.3	50	60	4	-40 to 125
74AHC1G00	Single 2-input NAND gate	2.0 - 5.5	CMOS	±8	3.5	50	60	1	-40 to 125
74AHC2G00	Dual 2-input NAND gate	2.0 - 5.5	CMOS	±8	3.5	50	60	2	-40 to 125
74AHCT00	Quad 2-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.3	50	60	4	-40 to 125
74AHCT132	Quad 2-input NAND gate Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±8	3.5	50	60	4	-40 to 125

## NAND Gates

Types in **bold** represent new products

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74AHCT1G00	Single 2-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.6	50	60	1	-40 to 125
74AHCT2G00	Dual 2-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.6	50	60	2	-40 to 125
74AUP1T00	Single supply 2-input voltage-translating NAND gate	2.3 - 3.6	CMOS	±1.9	3.7	15	70	1	-40 to 125
74AUP2G132	Dual 2-input NAND gate Schmitt-trigger	1.1 - 3.6	CMOS	±1.9	10	30	70	2	-40 to 125
74AXP1G00	Single 2-input NAND gate	0.7 - 2.75	CMOS	±4.5	2.7	5	70	1	-40 to 85
74AXP1G10	Single 3-input NAND gate	0.7 - 2.75	CMOS	±4.5	2.6	5	70	1	-40 to 85
74HC132	Quad 2-input NAND gate Schmitt-trigger	2.0 - 6.0	CMOS	±5.2	11	50	36	4	-40 to 125
74HCT132	Quad 2-input NAND gate Schmitt-trigger; TTL-enabled	4.5 - 5.5	TTL	±4	17	50	36	4	-40 to 125
<b>74LV00A</b>	Quad 2-input NAND gate	2.0 - 5.5	CMOS	±12	4.3	15	45	4	-40 to 125
74LV132	Quad 2-input NAND gate Schmitt-trigger	1.0 - 5.5	TTL	±12	10	50	30	4	-40 to 125
74LVC132A	Quad 2-input NAND gate Schmitt-trigger	1.2 - 3.6	CMOS/ LVTTTL	±24	3.4	50	175	4	-40 to 125
HEF4093B	Quad 2-input NAND gate Schmitt-trigger	3.0 - 15	CMOS	±2.4	3.0	50	10	4	-40 to 85
74AHC30	8-input NAND gate	2.0 - 5.5	CMOS	±8	3.6	50	60	1	-40 to 125
74AHCT30	8-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.3	50	60	1	-40 to 125
74ALVC00	Quad 2-input NAND gate	1.65 - 3.6	CMOS/ LVTTTL	±24	2.1	50	145	4	-40 to 85
74AUP1G00	Single 2-input NAND gate	1.1 - 3.6	CMOS	±1.9	8.3	30	70	1	-40 to 125
74AUP1G132	Single 2-input NAND gate Schmitt trigger	1.1 - 3.6	CMOS	±1.9	10	30	70	1	-40 to 125
74AUP1G38	Single 2-input NAND gate; open drain	1.1 - 3.6	CMOS	1.9	8.5	30	70	1	-40 to 125
74AUP2G00	Dual 2-input NAND gate	1.1 - 3.6	CMOS	±1.9	8.3	30	70	2	-40 to 125
74AUP2G38	Dual 2-input NAND gate; open drain	1.1 - 3.6	CMOS	1.9	8.5	30	70	2	-40 to 125
74HC00	Quad 2-input NAND gate	2.0 - 6.0	CMOS	±5.2	7.0	50	36	4	-40 to 125
74HC03	Quad 2-input NAND gate; open drain	2.0 - 6.0	CMOS	5.2	8.0	50	36	4	-40 to 125
74HC10	Triple 3-input NAND gate	2.0 - 6.0	CMOS	±5.2	9.0	50	36	3	-40 to 125
74HC1G00	Single 2-input NAND gate	2.0 - 6.0	CMOS	±2.6	7.0	50	36	1	-40 to 125
74HC20	Dual 4-input NAND gate	2.0 - 6.0	CMOS	±5.2	8.0	50	36	2	-40 to 125
74HC2G00	Dual 2-input NAND gate	2.0 - 6.0	CMOS	±5.6	9.0	50	36	2	-40 to 125
74HC30	8-input NAND gate	2.0 - 6.0	CMOS	±5.2	12	50	36	1	-40 to 125
74HCT00	Quad 2-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±4	10	50	36	4	-40 to 125
74HCT03	Quad 2-input NAND gate; TTL-enabled; open drain	4.5 - 5.5	TTL	±4	10	50	36	4	-40 to 125
74HCT10	Triple 3-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±4	11	50	36	3	-40 to 125
74HCT1G00	Single 2-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±2	10	50	36	1	-40 to 125
74HCT20	Dual 4-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±4	13	50	36	2	-40 to 125
74HCT2G00	Dual 2-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±4	12	50	36	2	-40 to 125
74HCT30	8-input NAND gate; TTL-enabled	4.5 - 5.5	TTL	±4	12	50	36	1	-40 to 125
74LV00	Quad 2-input NAND gate	1.0 - 5.5	TTL	±12	7	50	30	4	-40 to 125
74LV03	Quad 2-input NAND gate; TTL-enabled; open drain	1.0 - 5.5	TTL	±12	8.0	50	30	4	-40 to 125
74LV1T00	Single supply 2-input translating NAND gate	1.6 - 5.5	CMOS	±8	3.1	15	60	1	-40 to 125
74LVC00A	Quad 2-input NAND gate	1.2 - 3.6	CMOS/ LVTTTL	±24	2.1	50	150	4	-40 to 125
74LVC10A	Triple 3-input NAND gate	1.2 - 3.6	CMOS/ LVTTTL	±24	3.9	50	150	3	-40 to 125
74LVC1G00	Single 2-input NAND gate	1.65 - 5.5	CMOS/ LVTTTL	±32	2.2	50	175	1	-40 to 125
74LVC1G10	Single 3-input NAND gate	1.65 - 5.5	CMOS/ LVTTTL	±32	2.6	50	175	1	-40 to 125
74LVC1G38	Single 2-input NAND gate; open drain	1.65 - 5.5	CMOS/ LVTTTL	32	2.3	50	175	1	-40 to 125
74LVC2G00	Dual 2-input NAND gate	1.65 - 5.5	CMOS/ LVTTTL	±32	2.2	50	175	2	-40 to 125
74LVC2G38	Dual 2-input NAND gate; open drain	1.65 - 5.5	CMOS/ LVTTTL	32	2.1	50	175	2	-40 to 125
74LVC30A	8-input NAND gate	1.65 - 5.5	CMOS/ LVTTTL	24	3.6	50	175	1	-40 to 125
HEF4011B	Quad 2-input NAND gate	3.0 - 15	CMOS	±2.4	20	50	10	4	-40 to 85

## NOR Gates

Types in **bold** represent new products

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74AHC02	Quad 2-input NOR gate	2.0 - 5.5	CMOS	±8	2.9	50	60	4	-40 to 125
74AHCT02	Quad 2-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.8	50	60	4	-40 to 125
74AHC1G02	Single 2-input NOR gate	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125
74AHCT1G02	Single 2-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.5	50	60	1	-40 to 125
74ALVC02	Quad 2-input NOR gate	1.65 - 3.6	CMOS/ LVTTTL	±24	2.2	50	150	4	-40 to 85
74AUP1G02	Single 2-input NOR gate	1.1 - 3.6	CMOS	±1.9	8.3	30	70	1	-40 to 125
74AUP1T02	Single supply 2-input voltage-translating NOR gate	2.3 - 3.6	CMOS	±1.9	3.6	15	70	1	-40 to 125
74AUP2G02	Dual 2-input NOR gate	1.1 - 3.6	CMOS	±1.9	8.3	30	70	2	-40 to 125
74AXP1G02	Single 2-input NOR gate	0.7 - 2.75	CMOS	±4.5	2.6	5	70	1	-40 to 85
74HC02	Quad 2-input NOR gate	2.0 - 6.0	CMOS	±5.2	7.0	50	36	4	-40 to 125
74HCT02	Quad 2-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±4	9.0	50	36	4	-40 to 125
74HC1G02	Single 2-input NOR gate	2.0 - 6.0	CMOS	±2.6	7.0	50	36	1	-40 to 125
74HCT1G02	Single 2-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±2.0	9.0	50	36	1	-40 to 125
74HC27	Triple 3-input NOR gate	2.0 - 6.0	CMOS	±5.2	8.0	50	36	3	-40 to 125
74HCT27	Triple 3-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±4	10	50	36	3	-40 to 125
74HC2G02	Dual 2-input NOR gate	2.0 - 6.0	CMOS	±5.2	9.0	50	36	2	-40 to 125
74HCT2G02	Dual 2-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±4	12	50	36	2	-40 to 125
74HC4002	Dual 4-input NOR gate	2.0 - 6.0	CMOS	±5.2	9.0	50	36	2	-40 to 125
74HCT4002	Dual 4-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±4	11	50	36	2	-40 to 125
74LV02	Quad 2-input NOR gate	1.0 - 5.5	TTL	±12	6.0	50	30	4	-40 to 125
<b>74LV02A</b>	Quad 2-input NOR gate	2.0 - 5.5	CMOS	±12	4.3	15	45	4	-40 to 125
74LV1T02	Single supply 2-input translating NOR gate	1.6 - 5.5	CMOS	±8	3.2	15	60	1	-40 to 125
74LVC02A	Quad 2-input NOR gate	1.2 - 3.6	CMOS/ LVTTTL	±24	2.1	50	150	4	-40 to 125
74LVC1G02	Single 2-input NOR gate	1.65 - 5.5	CMOS/ LVTTTL	±32	2.1	50	150	1	-40 to 125
74LVC1G27	Single 3-input NOR gate	1.65 - 5.5	CMOS/ LVTTTL	±32	2.6	50	150	1	-40 to 125
74LVC2G02	Dual 2-input NOR gate	1.65 - 5.5	CMOS/ LVTTTL	±32	2.4	50	150	2	-40 to 125
74LVT02	Quad 2-input NOR gate	2.7 - 3.6	TTL	-20 / 32	2.8	50	150	4	-40 to 85
74VHC02	Quad 2-input NOR gate	2.0 - 5.5	CMOS	±8	2.9	50	60	4	-40 to 125
74VHCT02	Quad 2-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.8	50	60	4	-40 to 125
HEF4001B	Quad 2-input NOR gate	3.0 - 15	CMOS	±2.4	20	50	10	4	-40 to 85
HEF4002B	Dual 4-input NOR gate	3.0 - 15	CMOS	±2.4	20	50	10	4	-40 to 85
XC7SET02	Single 2-input NOR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.5	50	60	1	-40 to 125
XC7SH02	Single 2-input NOR gate	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125

## OR Gates

Types in **bold** represent new products

Type number	Description	V <sub>cc</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (typ) (pF)	f <sub>max</sub> (MHz)	Number of bits	T <sub>amb</sub> (°C)
74ABT32	Quad 2-input OR gate	4.5 - 5.5	TTL	-15 / 20	2.3	50	100	4	-40 to 85
74AHC1G32	Single 2-input OR gate	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125
74AHCT1G32	Single 2-input OR gate	4.5 - 5.5	TTL	±8	3.3	50	60	1	-40 to 125
74AHC2G32	Dual 2-input OR gate	2.0 - 5.5	CMOS	±8	3.2	50	60	2	-40 to 125
74AHCT2G32	Dual 2-input OR gate	4.5 - 5.5	TTL	±8	3.3	50	60	2	-40 to 125
74AHC32	Quad 2-input OR gate	2.0 - 5.5	CMOS	±8	3.5	50	60	4	-40 to 125
74AHCT32	Quad 2-input OR gate; TTL-enabled	4.5 - 5.5	TTL	±8	5.0	50	60	4	-40 to 125
74ALVC32	Quad 2-input OR gate	1.65 - 3.6	CMOS/LVTTL	±24	2.0	50	150	4	-40 to 125
74AUP1G32	Single 2-input OR gate	1.1 - 3.6	CMOS	±1.9	7.9	30	70	1	-40 to 125
74AUP1G332	Single 3-input OR gate	1.1 - 3.6	CMOS	±1.9	6.8	30	70	1	-40 to 125
74AUP1T32	Single supply 2-input voltage-translating OR gate	2.3 - 3.6	CMOS	±1.9	3.6	15	70	1	-40 to 125
74AUP2G32	Dual 2-input OR gate	1.1 - 3.6	CMOS	±1.9	7.9	30	70	2	-40 to 125
74AXP1G32	Single 2-input OR gate	0.7 - 2.75	CMOS	±4.5	2.5	5	70	1	-40 to 85
74HC1G32	Single 2-input OR gate	2.0 - 6.0	CMOS	±2.6	8.0	50	36	1	-40 to 125
74HCT1G32	Single 2-input OR gate; TTL-enabled	4.5 - 5.5	TTL	±2.0	10	50	36	1	-40 to 125
74HC2G32	Dual 2-input OR gate	2.0 - 6.0	CMOS	±5.2	9.0	50	36	2	-40 to 125
74HCT2G32	Dual 2-input OR gate; TTL-enabled	4.5 - 5.5	TTL	±4.0	13	50	36	2	-40 to 125
74HC32	Quad 2-input OR gate	2.0 - 6.0	CMOS	±5.2	6.0	50	36	4	-40 to 125
74HCT32	Quad 2-input OR gate	4.5 - 5.5	TTL	±4.0	9.0	50	36	4	-40 to 125
74HC4075	Triple 3-input OR gate	2.0 - 6.0	CMOS	±5.2	8.0	50	36	3	-40 to 125
74HCT4075	Triple 3-input OR gate; TTL-enabled	4.5 - 5.5	TTL	±4	10	50	36	3	-40 to 125
74LV1T32	Single supply 2-input translating OR gate	1.6 - 5.5	CMOS	±8	4.4	15	60	1	-40 to 125
<b>74LV32A</b>	Quad 2-input OR gate	2.0 - 5.5	CMOS	±12	4.2	15	45	4	-40 to 125
<b>74LV7032A</b>	Quad 2-input OR gate; Schmitt trigger	2.0 - 5.5	CMOS	±12	4.3	15	45	4	-40 to 125
74LVC1G32	Single 2-input OR gate	1.65 - 5.5	CMOS/LVTTL	±32	2.1	50	150	1	-40 to 125
74LVC1G332	Single 3-input OR gate	1.65 - 5.5	CMOS/LVTTL	±32	2.6	50	150	1	-40 to 125
74LVC2G32	Dual 2-input OR gate	1.65 - 5.5	CMOS/LVTTL	±32	2.2	50	150	2	-40 to 125
74LVC32A	Quad 2-input OR gate	1.2 - 3.6	CMOS/LVTTL	±24	2.1	50	150	4	-40 to 125
74VHC32	Quad 2-input OR gate	2.0 - 5.5	CMOS	±8	3.5	50	60	4	-40 to 125
74VHCT32	Quad 2-input OR gate; TTL-enabled	4.5 - 5.5	TTL	±8	5.0	50	60	4	-40 to 125
HEF4071B	Quad 2-input OR gate	3.0 - 15	CMOS	±2.4	20	50	10	4	-40 to 125
XC7SET32	Single 2-input OR gate; TTL-enabled	4.5 - 5.5	TTL	±8	3.3	50	60	1	-40 to 125
XC7SH32	Single 2-input OR gate	2.0 - 5.5	CMOS	±8	3.2	50	60	1	-40 to 125

## Digital comparators

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	T <sub>amb</sub> (°C)
74HC688	8-bit magnitude comparator	2.0 - 6.0	CMOS	±5.2	17	50	-40 to 125
74HCT688	8-bit magnitude comparator; TTL-enabled	4.5 - 5.5	TTL	±4	17	50	-40 to 125
74HC85	4-bit magnitude comparator	2.0 - 6.0	CMOS	±5.2	23	50	-40 to 125
74HCT85	4-bit magnitude comparator; TTL-enabled	4.5 - 5.5	TTL	±4	26	50	-40 to 125

## Parity generators-checkers

Type number	Description	V <sub>CC</sub> (V)	Logic switching levels	Output drive capability (mA)	t <sub>pd</sub> (ns)	Output Load C <sub>L</sub> (pF)	T <sub>amb</sub> (°C)
74HC280	9-bit odd/even parity generator/checker	2.0 - 6.0	CMOS	±5.2	17	50	-40 to 125
74HCT280	9-bit odd/even parity generator/checker; TTL-enabled	4.5 - 5.5	TTL	±4	18	50	-40 to 125

## Standard logic functions

**74 XXX XXX XXX**

Logic family	Function number	Package type
ABT		BQ DQFN
AHC(T)		D SO
ALVC		DB SSOP
ALVT		DGG TSSOP
AUP		DGV TVSOP
AVC		DL SSOP
CB3Q		DS QSOP
CBT(D)		EV BGA
CBTLV(D)		GU XQFN
HC(T)		GU12 XQFN
HEF4000B		PW TSSOP
LV		T SO
LV-A(T)		TS SSOP
LVC		TT TSSOP
LVT		
NPIC		
VHC(T)		
XC7		

## Mini logic functions

**74 XXX XG  
XT XXX XXX**


























Logic family	Gate format	Function number	Package type
AHC(T)	1G Single-gate		DC PicoGate
AUP	2G Dual-gate		DP PicoGate
AVC	3G Triple-gate		GF MicroPak
AXP			GM MicroPak
CBT(D)	<b>Translator format</b>		GN MicroPak
CBTLV(D)			GS MicroPak
HC(T)	1T Single-translator		GT MicroPak
LV	2T Dual-translator		GU MicroPak
LVC	3T Triple-translator		GU33 MicroPak
XC7	4T Quad-translator		GV PicoGate
			GW PicoGate
			GX MicroPak
			GX4 MicroPak
			PW PicoGate
			UK MicroPak






























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## Package details and packing methods SMD

Package details							Packing methods																				
Pins	Package	Package size (L x w x h) (mm)	Package outer dimensions (L x w) (mm)	Footprint area (mm²)	Lead pitch (mm)	Package	Packing method and tape dimension	Reel dimension (d x w) (mm)	Packing quantity and ordering code (12NC ending)																		
									800	1000	1500	2000	2400	2500	3000	4000	5000	6000	8000	9000	10000	15000	20000	30000	50000		
2	DSN0402-2 (SOD992)	0.4 x 0.2 x 0.1	0.4 x 0.2	0.08	0.25		2 mm pitch. 8 mm tape and reel	180 x 8													-315						
	DSN0402B (SOD992B)	0.4 x 0.2 x 0.1	0.5 x 0.3	0.193	0.28		2 mm pitch. 8 mm tape and reel	180 x 8													-315						
	DSN0603B-2 (SOD962B)	0.6 x 0.3 x 0.2	0.6 x 0.3	0.18	0.4		2 mm pitch. 8 mm tape and reel	180 x 8													-315						
	DSN0603-2 (SOD962-2)	0.6 x 0.3 x 0.3	0.6 x 0.3	0.18	0.4		2 mm pitch. 8 mm tape and reel	180 x 8													-315	-317					
	DSN0603-2 (SOD962)	0.6 x 0.3 x 0.3	0.6 x 0.3	0.18	0.4		2 mm pitch. 8 mm tape and reel	180 x 8													-315						
	DFN0603-2 (SOD972E)	0.63 x 0.33 x 0.25	0.63 x 0.33	0.2	0.4		2 mm pitch. 8 mm tape and reel	180 x 8																			
	DSN1006-2 (SOD993)	1 x 0.6 x 0.27	1 x 0.6	0.6	0.65		2 mm pitch. 8 mm tape and reel	180 x 8													-315						
	DSN1006-2 (SOD993B)	1 x 0.6 x 0.27	1.2 x 0.8	0.96	0.65		2 mm pitch. 8 mm tape and reel	180 x 8													-315						
	DSN1006U-2 (SOD995)	1 x 0.6 x 0.27	1 x 0.6	0.6	0.325		2 mm pitch. 8 mm tape and reel	180 x 8													-315						
	DFN1006D-2 (SOD882D)	1 x 0.6 x 0.4	1 x 0.6	0.6	0.65		2 mm pitch. 8 mm tape and reel	180 x 8													-315						
	DFN1006-2 (SOD882)	1.0 x 0.6 x 0.5	1 x 0.6	0.6	0.65		2 mm pitch. 8 mm tape and reel	180 x 8													-315						
	SOD523 (SC-79)	1.2 x 0.8 x 0.6	1.6 x 0.8	1.28	1.4		2 mm pitch. 8 mm tape and reel	180 x 8													-115 -699	-315				-135	-335
	DSN1608-2 (SOD964)	1.6 x 0.8 x 0.29	1.6 x 0.8	1.28	0.6		2 mm pitch. 8 mm tape and reel	180 x 8													-315						
	DFN1608D-2 (SOD1608)	1.6 x 0.8 x 0.37	1.6 x 0.8	1.28	0.94		2 mm pitch. 8 mm tape and reel	180 x 8													-315						
	SC-90 (SOD323F)	1.7 x 1.25 x 0.7	2.65 x 2.35	6.23	2.2		4 mm pitch. 8 mm tape and reel	180 x 8 286 x 8													-115					-145	
	SOD323	1.7 x 1.25 x 0.95	2.65 x 2.35	6.23	1.3		4 mm pitch. 8 mm tape and reel	180 x 8 286 x 8													-115					-145	
	SOD123F	2.6 x 1.6 x 1.1	3.5 x 2.1	7.35	2.8		4 mm pitch. 8 mm tape and reel	180 x 8													-115						
	CFP3 (SOD123W)	2.6 x 1.7 x 1	3.5 x 2.1	7.35	2.8		4 mm pitch. 8 mm tape and reel	180 x 8													-115						
	SOD123	2.675 x 1.6 x 1.15	3.6 x 2.1	7.56	3.27		4 mm pitch. 8 mm tape and reel	180 x 8 330 x 8													-115					-118	
	LLDS; MiniMelf (SOD80C)	3.5 x 1.5	3.7 x 1.6	5.92			4 mm pitch. 8 mm tape and reel	180 x 8													-115					-135	
CFP5 (SOD128)	3.8 x 2.5 x 1	4.7 x 2.5	11.75	4		4 mm pitch. 12 mm tape and reel	180 x 12													-115							
3	DFN0603-3 (SOT8013)	0.63 x 0.33 x 0.25	0.63 x 0.33	0.408	0		2 mm pitch. 8 mm tape and reel	180 x 8													-317						
	DFN0606 (SOT8001)	0.62 x 0.62 x 0.37	0.62 x 0.62	0.35	0.35		2 mm pitch. 8 mm tape and reel	180 x 8													-125						
	DFN1006B-3 (SOT883B)	1.0 x 0.6 x 0.37	1 x 0.6	0.6	0.35		2 mm pitch. 8 mm tape and reel	180 x 8												-315							
	DFN1006-3 (SOT883)	1.0 x 0.6 x 0.48	1 x 0.6	0.6	0.35		2 mm pitch. 8 mm tape and reel	180 x 8												-315							

## Package details and packing methods SMD

Package details							Packing methods																								
Pins	Package	Package size (L x w x h) (mm)	Package outer dimensions (L x w) (mm)	Footprint area (mm <sup>2</sup> )	Lead pitch (mm)	Package	Packing method and tape dimension	Reel dimension (d x w) (mm)	Packing quantity and ordering code (12NC ending)																						
									800	1000	1500	2000	2400	2500	3000	4000	5000	6000	8000	9000	10000	15000	20000	30000	50000						
3	DFN1010D-3 (SOT1215)	1.1 x 1 x 0.37	1.1 x 1	1.1	0.75		4 mm pitch. 8 mm tape and reel	180 x 8											-147												
	DPAK (SOT428C)	6.1 x 6.6 x 2.3	10 x 6.6	66	2.29		8 mm pitch. 16 mm tape and reel									-118															
	D2PAK (SOT404A)	11 x 10 x 4.3	15.3 x 10	153	2.54		16 mm pitch. 24 mm tape and reel	330 x 24	-118																						
	D2PAK (SOT404)	11 x 10 x 4.3	15.3 x 10	153	2.54		16 mm pitch. 24 mm tape and reel	330 x 24	-118																						
	SC-70 (SOT323)	2 x 1.25 x 0.95	2.1 x 2	4.2	1.3		4 mm pitch. 8 mm tape and reel	180 x 8																					-300		
	DFN2020-3 (SOT1061)	2 x 2 x 0.65	2 x 2	4	1.3		4 mm pitch. 8 mm tape and reel	180 x 8 330 x 8																							
	DFN2020D-3 (SOT1061D)	2 x 2 x 0.65	2 x 2	4	1.3		4 mm pitch. 8 mm tape and reel	180 x 8																							
	TO-236AB (SOT23)	2.9 x 1.3 x 1	2.3 x 1.3	2.99	1.9		4 mm pitch. 8 mm tape and reel	180 x 8 286 x 8																						-185	
	SOT89 (SC-62)	4.5 x 2.5 x 1.5	4.5 x 4	18	1.5		8 mm pitch. 12 mm tape and reel	180 x 12			-147																				
	CFP15 (SOT1289)	5.8 x 4.3 x 0.78	6.5 x 4.3	27.95	2.13		8 mm pitch. 12 mm tape and reel	180 x 12 330 x 12				-146																			
CFP15B (SOT1289B)	5.8 x 4.3 x 0.95	6.8 x 4.3	29.24	2.13		8 mm pitch. 12 mm tape and reel																									
4	X2SON4 (SOT1269-2)	0.6 x 0.6 x 0.35	0.6 x 0.6	0.36	0.4		2 mm pitch. 8 mm tape and reel	180 x 8																					-147		
	SOT143B	2.9 x 1.3 x 1	2.9 x 2.3	6.67	1.9		4 mm pitch. 8 mm tape and reel	180 x 8 286 x 8																					-235		
	LFPACK56E; Power-SO8 (SOT1023)	4.58 x 5.13 x 1.03	5 x 6	30	1.27		8 mm pitch. 12 mm tape and reel	180 x 12				-115																			
	LFPACK56-UL2595 (SOT1023A)	4.6 x 5.1 x 1	5 x 6	30	1.27		8 mm pitch. 12 mm tape and reel	180 x 12				-115																			
	LFPACK56; Power-SO8 (SOT669)	4.9 x 4.45 x 1	5 x 6	30	1.27		8 mm pitch. 12 mm tape and reel	180 x 12				-115																			
	SC-73 (SOT223)	6.5 x 3.5 x 1.65	7 x 6.5	45.5	4.6		8 mm pitch. 12 mm tape and reel	180 x 12 330 x 12				-115																		-135	
	LFPACK88 (SOT1235)	6.3 x 8 x 1.75	8 x 8	64	2		12 mm pitch. 16 mm tape and reel	330 x 16																							
5	X2SON5 (SOT1226)	0.8 x 0.8 x 0.35	0.8 x 0.8	0.64	0.4		2 mm pitch. 8 mm tape and reel	180 x 8																					-125		
	TSSOP5 (SOT353)	2 x 1.25 x 0.95	2.1 x 2	4.2	1.3		4 mm pitch. 8 mm tape and reel	180 x 8 286 x 8																						-115	
	TSSOP5 (SOT353-1)	2.1 x 1.25 x 0.95	2.1 x 2	4.2	0.65		4 mm pitch. 8 mm tape and reel	180 x 8																						-125	
	TSOP5 (SOT753)	2.9 x 1.5 x 1	2.9 x 2.75	8	0.95		4 mm pitch. 8 mm tape and reel	180 x 8																						-125	
6	XSON6 (SOT1115)	0.9 x 1.0 x 0.35	0.9 x 1	0.9	0.3		4 mm pitch. 8 mm tape and reel	180 x 8																						-125	
	XSON6 (SOT1202)	1 x 1 x 0.35	1 x 1	1	0.35		4 mm pitch. 8 mm tape and reel	180 x 8																							-125
	XSON6 (SOT891)	1 x 1 x 0.5	1 x 1	1	0.35		4 mm pitch. 8 mm tape and reel	180 x 8																							-125







## Package details and packing methods WLCSP

Package name	# of balls	Package size (l x w x h) (mm)	Pitch (mm)	Image	Basic type
WLCSP4	4	0.76 x 0.76 x 0.47	0.4		IP4369CX4
		0.8 x 0.8 x 0.15			PMCM4401UNE
					PMCM4401UPE
					PMCM4401VNE
					PMCM4401VPE
					PMCM4402UPE
					PMCM440VNE
WLCSP5	5	0.77 x 1.17 x 0.57	0.4		PCMF1HDMI14S
					PCMF1HDMI2S
					PCMF1USB30
					PCMF1USB3B
					PCMF1USB3S
					PESD1USB30
					PESD1USB3B
PESD1USB3S					
WLCSP6	6	0.95 x 1.34 x 0.6	0.4		IP3319CX6
		0.65 x 0.44 x 0.27	0.44		74AUP1G34UK
			74AUP1G97UK		
			74AUP1T97UK		
		1.45 x 1 x 0.35	0.5		PMCM6501UNE
		PMCM6501UPE			
		PMCM6501VNE			
PMCM6501VPE					
1.5 x 1 x 0.35	PMCM650CUNE				
WLCSP9	9	1.48 x 1.48 x 0.35	0.5		PMCM950ENE
WLCSP10	10	1.57 x 1.17 x 0.57	0.4		PCMF2HDMI14S
					PCMF2HDMI2S
					PCMF2USB30
					PCMF2USB3B
					PCMF2USB3S
					PESD2USB30
					PESD2USB3B
PESD2USB3S					
WLCSP15	15	2.37 x 1.17 x 0.57	0.4		PCMF3HDMI14S
					PCMF3HDMI2S
					PCMF3USB30

## Package details and packing methods WLCSP

Package name	# of balls	Package size (l x w x h) (mm)	Pitch (mm)	Image	Basic type
WLCSP15	15	2.37 x 1.17 x 0.57	0.4		PCMF3USB3B
					PCMF3USB3S
					PESD3USB30
					PESD3USB3B
					PESD3USB3S
WLCSP25	25	2 x 2 x 0.5	0.4		IP4856CX25

## Packing details glass diodes, single ended and through hole packages

Pins/ leads	Package	Packing method and tape/reel/tube dimensions	Package	Ordering code (12 NC ending)	Packing quantity
2	SOD27	26 mm tape ammo pack, axial		-143	5000 pcs
		52 mm tape ammo pack, axial		-133	10000 pcs
		52 mm reel pack, axial		-113	10000 pcs
	SOD66	52 mm tape ammo pack, axial		-133	10000 pcs
		52 mm reel pack, axial		-113	10000 pcs
	SOD68	SOD68	26 mm tape ammo pack, axial		-143
52 mm reel pack, axial			-113		10000 pcs
52 mm tape ammo pack, axial			-133		10000 pcs
3	SOT78 (TO-220)	Rail packing, 50 pcs/tube, tube length = 520 mm		-127	1000 pcs
	I2PAK (SOT226)	Rail packing, 50 pcs/tube, tube length = 520 mm		-127	1000 pcs

## Packing letter codes used in orderable part number

Packing letter	3NC	Packing type short name	Packing type description	Short packing type description
E	551	TRAYBDP	STANDARD MARKING * TRAY DRY PACK, BAKEABLE, SINGLE	Tray Dry Pack, Bakeable, Single
E	551	TRAYBDP	STANDARD MARKING * TRAY DRY PACK, BAKEABLE, SINGLE	Tray Dry Pack, Bakeable, Single
F	135	REELLG	REEL 13" Q1/T1 *STANDARD MARK SMD LARGE PQ	Reel Pack, SMD, Large
FL	113	REELA52	STANDARD MARKING * REEL PACK, AXIAL, STANDARD, 52MM	Reel Pack, Axial, Standard
H	125	REELR	REEL 7" Q3/T4 *STANDARD MARK	Reel Pack, 7" Q3/T4
HL	653	REEL13	REEL 13" Q1/T1 *STANDARD MARK SMD (CECC)	Reel Pack, SMD, 13", Q1/T1 CECC
HP	128	REEL13T	REEL 13" Q2/T3 *STANDARD MARK SMD	Reel Pack, SMD, 13", Q2/T3
J	118	REEL13	REEL 13" Q1/T1 *STANDARD MARK SMD	Reel Pack, SMD, 13" Q1/T1
JL	652	TUBE-BULK	STANDARD MARKING - TUBE, CECC	Bulk Pack, CECC
K	557	TRAYDPM	STANDARD MARKING * TRAY DRY PACK, BAKEABLE, MULTIPLE	Tray Dry Pack, Bakeable, Multiple
KL	602	TUBE-BULK	STANDARD MARKING - TUBE (SIGNETICS)	Tube (Signetics)
M	699	SPEC	SEE SPEC. ON ORDER FOR MARKING, BRANDING, PACKING	See specification on order for Marking, Branding, Packi
Q	127	RAILH	STANDARD MARKING * HORIZONTAL, RAIL PACK	Horizontal, Rail Pack
QP	116	REEL48	STANDARD MARKING * REEL PACK, 48MM WIDE, 400MM DIA	Reel Pack, Radial
R	215	REELLP	REEL 7" Q3/T4 *STANDARD MARK SMD LOW PROFILE	Reel Pack, SMD, 7" Q3/T4 Low Profile
RL	133	AMMOA52	STANDARD MARKING * AMMOPACK, AXIAL, 52M	Ammopack, Axial, 52mm
RP	143	AMMOA26	STANDARD MARKING * AMMOPACK, AXIAL, 26MM	Ammopack, Axial, 26mm
S	512	TUBEDP	STANDARD MARKING * TUBE DRY PACK	Tube Dry Pack
U	112	TUBE-BULK	STANDARD MARKING * IC'S TUBE - DSC BULK PACK	Bulk Pack
VL	235	REELGLP	REEL 11" Q3/T4 *STANDARD MARK SMD LOW PROFILE LARGE PQ	Reel Pack, SMD, 11" Q3/T4 Low Profile, Large
X	115	REEL7	REEL 7" Q1/T1 *STANDARD MARK SMD	Reel Pack, SMD 7" Q1/T1
XL	132	REEL7SMDM	REEL 7" Q1/T1, Q3/T4 *STANDARD MARK SMD	Reel 7" Q1/T1, Q3/T4
XP	623	REEL13	REEL 13" Q1/T1 *STANDARD MARK SMD (SIGNETICS)	Reel Pack, SMD, 13" (Signetics)
Y	518	REEL13DP	REEL 13" Q1/T1 *STANDARD MARK SMD DP	Reel Dry Pack, SMD, 13" Q1/T1
YL	315	REELP2	REEL 7" Q1/T1 *STANDARD MARK SMD PITCH 2MM	Reel Pack, SMD, 7" Q1/T1 Pitch 2mm
Z	023	REEL7	REEL 7" Q1/T1 *STANDARD MARK CIRCUIT ELEMENT	Reel 7" Q1/T1
Z	084	REEL7LPQ	REEL 7" Q1/T1 *STANDARD MARK CHIPS LARGE PQ	REEL 7" Q1/T1 Large
Z	147	REEL90D EGREET	REEL 7" Q2/T3 *STANDARD MARK	Reel 7" Q2/T3
Z	134	REEL13 LARGE PQ	REEL 13" Q1/T1 *STANDARD MARK SMD LARGE PQ	Reel 13" Q1/T1 in LargePack
Z	013	REEL13T180	REEL 13" Q4/T2 *STANDARD MARK	Reel Pack 13", 180 degree turned
Z	146	REEL270 DEGREEET	REEL 7" Q4/T2 *STANDARD MARK	Reel 7" Q4/T2
Z	471	REEL7SBB1	REEL 7" Q1/T1 *STANDARD MARK SBB	Reel 7" Q1/T1 in Sulfur Barrier Bag



## Packing letter codes used in orderable part number

Packing letter	3NC	Packing type short name	Packing type description	Short packing type description
Z	165	REELLGR	REEL 11" Q3/T4 *STANDARD MARK SMD LARGE PQ	Reel Pack, SMD, Large, Reverse
Z	185	REEL4PM	MULTI-REEL 7" Q3/T4 *STANDARD MARK SMD PITCH4MM	Multi-Reel Pack, SMD 7" Q3/T4 Pitch 4mm
Z	012	REEL7SMDP	REEL 7" Q1/T1 *SPECIAL MARK CHIPS DP	Reel 7" Q1/T1 in Drypack
Z	139	REEL13Q4	REEL 13" Q4/T2 *STANDARD MARK	Reel 13" Q4/T2
Z	317	REELP2LPQ	REEL 7" Q1/T1-Q2/T3*STANDARD MARK SMD PITCH2MM LPQ	REEL 7" Q1/T1-Q2/T3 SMD Pitch 2mm Large
Z	145	REELM	MULTI-REEL 7" Q1/T1 *STANDARD MARK SMD	Multi-Reel Pack, SMD
Z	335	REELGP2	REEL 11" Q1/T1 *STANDARD MARK SMD PITCH2MM LARGE PQ	Reel Pack, SMD, 11" Q1/T1 Large, Pitch 2mm
Z	184	REEL7SMD	REEL 7" Q1/T1 *STANDARD MARK SMD	Reel 7" Q1/T1
Z	014	REEL7SM	REEL 7" Q1/T1 *SPECIAL MARK CHIPS	Reel 7" Q1/T1
Z	087	REEL7SMC2	REEL 7" Q2/T3 *STANDARD MARK CHIPS	Reel 7" Q2/T3
Z	300	REEL11MUL3	MULTI-REEL 11" T4/Q3 *STANDARD MARK SMD PITCH4MM	Multi-reel 11" T4/Q3 SMD Pitch 4mm
Z	301	REEL11MUL1	MULTI-REEL 11" T1/Q1 *STANDARD MARK SMD PITCH4MM	Multi-reel 11" T1/Q1 SMD Pitch 4mm

## Package cross reference list

Type	Competitor	Nexperia	Pins/ Leads
6 Lead DFN	ON Semi	DFN2020-6 (SOT1118)	6
CL2	Toshiba	DSN0402-2 (SOD992)	2
CLP0603	Vishay	DSN0603-2 (SOD962)	2
CMAK/ CMPAK	Renesas	SOT323	3
CMPAK-5(T)	Renesas	SOT353	5
CMPAK-6	Renesas	SOT363	6
CMPAK/ CMAK	Renesas	SOT323	3
CP4	Toshiba	SOT143B	4
CS6	Toshiba	DFN1010-6 (SOT891)	6
CST3	Toshiba	DFN1006-3 (SOT883)	3
CST3	Toshiba	DFN1006B-3 (SOT883B)	3
CTS2 (fsc)	Toshiba	DFN1006-2 (SOD882)	2
CTS2 (fsc)	Toshiba	DFN1006D-2 (SOD882D)	2
D2PAK	Infineon	D2PAK (SOT404)	3
D2PAK	ON Semi	D2PAK (SOT404)	3
D2PAK	ST	D2PAK (SOT404)	3
D2PAK	Toshiba	D2PAK (SOT404)	3
D2PAK	Vishay	D2PAK (SOT404)	3
D2PAK	Infineon	LFPAK88 (SOT1235)	4
D2PAK	ON Semi	LFPAK88 (SOT1235)	4
D2PAK	ST	LFPAK88 (SOT1235)	4
D2PAK	Vishay	LFPAK88 (SOT1235)	4
D2PAK	Infineon	D2PAK (SOT404)	3
D2PAK	ST	D2PAK (SOT404)	3
D2PAK	Vishay	D2PAK (SOT404)	3
D2PAK 3	ON Semi	D2PAK (SOT404)	3
D2PAK 3	ON Semi	LFPAK88 (SOT1235)	4
D2PAK 3	ON Semi	D2PAK (SOT404)	3
D2PAK-3	ON Semi	D2PAK (SOT404)	3
D2PAK-7	Infineon	LFPAK88 (SOT1235)	4
D2PAK-7	ON Semi	LFPAK88 (SOT1235)	4
D2PAK-7	Vishay	LFPAK88 (SOT1235)	4
D2PAK*	Diodes Inc.	D2PAK (SOT404)	3
D2PAK+	Toshiba	LFPAK88 (SOT1235)	4
DFN-5	ON Semi	LFPAK56 (SOT669)	4
DFN-8	ON Semi	LFPAK56D (SOT1205)	8
DFN1006-3	Diodes Inc.	DFN1006-3 (SOT883)	3
DFN1006H4-3	Diodes Inc.	DFN1006-3 (SOT883)	3
DFN1411*	Diodes Inc.	DFN1010D-3 (SOT1215)	3
DFN2	ST	DSN0603-2 (SOD962)	2
DSN2, 0.4 x 0.2	ON Semi	DSN0402-2 (SOD992)	2
DSN2, 0.6 x 0.3	ON Semi	DSN0603-2 (SOD962)	2
DSN2, 1.0 x 0.6	ON Semi	DSN1006-2 (SOD993)	2

Type	Competitor	Nexperia	Pins/ Leads
DSN2, 1.0 x 0.6	ON Semi	DFN1006D-2 (SOD882D)	2
DSN2, 1.6 x 0.8	ON Semi	DFN1608D-2 (SOD1608)	2
EMD2	Rohm	SOD523	2
EMD3/EMT3	Rohm	DFN1006-3 (SOT883)	3
EMT3/EMD3	Rohm	DFN1006-3 (SOT883)	3
EMT3F*	Rohm	DFN1006-3 (SOT883)	3
ESC/TESC	Toshiba	SOD523	2
ESM	Toshiba	DFN1006-3 (SOT883)	3
FM8	Toshiba	SOT96	8
FS6*	Toshiba	DFN1010B-6 (SOT1216)	6
GMD2	Rohm	DSN0603-2 (SOD962)	2
H2PAK-2	ST	D2PAK (SOT404)	3
HSMT8	Rohm	LFPAK33 (SOT1210)	8
HSON-8	Renesas	LFPAK56 (SOT669)	4
HSON-8 Dual	Renesas	LFPAK56D (SOT1205)	8
HSOP8 (Dual)	Rohm	LFPAK56D (SOT1205)	8
HSOP8 (Single)	Rohm	LFPAK56 (SOT669)	4
HSOP8 (Single)	Rohm	LFPAK56E (SOT1023)	4
HUML2020L8 (Dual)	Rohm	DFN2020-6 (SOT1118)	6
HUML2020L8 (Single)	Rohm	DFN2020MD-6 (SOT1220)	6
I2PAK	ON Semi	I2PAK (SOT226)	3
I2PAK	ST	I2PAK (SOT226)	3
KMD2	Rohm	DFN1608D-2 (SOD1608)	2
LDBAK(S)-(1)	Renesas	D2PAK (SOT404)	3
LFPAK	Renesas	LFPAK56 (SOT669)	5
LFPAK 5x6	ST	LFPAK56 (SOT669)	4
LFPAK4	ON Semi	LFPAK56 (SOT669)	4
LFPAK56, HSON-8	Renesas	LFPAK56E (SOT1023)	4
LFPAK8	ON Semi	LFPAK56E (SOT1023)	4
LG A 1.0 x 0.6mm	Texas Instruments	DFN1006B-3 (SOT883B)	3
LLD	Renesas	SOD80C	2
LLDS	Rohm	SOD80C	2
LLP1006-2L	Vishay	DFN1006-2 (SOD882)	2
LLP1006-2L	Vishay	DFN1006D-2 (SOD882D)	2
LLP1006-2M	Vishay	DFN1006-2 (SOD882)	2
LLP1006-2M	Vishay	DFN1006D-2 (SOD882D)	2
LLP75-7L	Vishay	DFN1616-6 (SOT1189)	6
LPDS/LPTS	Rohm	D2PAK (SOT404)	3
LPTS	Rohm	D2PAK (SOT404)	3
LPTS/LPDS	Rohm	D2PAK (SOT404)	3
M-Flat	Toshiba	SOD128	2
Micro 3	Int. Rectifier	SOT23	3
Micro 6	Int. Rectifier	SOT457	6

Types with \* show footprint compatibility only

## Package cross reference list

Type	Competitor	Nexperia	Pins/Leads
MICRO FOOT 0.8 x 0.8	Vishay	WLCSP4	4
MICRO FOOT 0.8 x 0.8*	Vishay	DFN1010D-3 (SOT1215)	3
MICRO FOOT 1 x 1.2*	Vishay	DFN1010D-3 (SOT1215)	3
MICRO FOOT 1 x 1.5*	Vishay	DFN1010D-3 (SOT1215)	3
MICRO FOOT 1 x 1*	Vishay	DFN1010D-3 (SOT1215)	3
MICRO FOOT 1.5 x 1.0	Vishay	WLCSP6	6
MICRO FOOT 1.6 x 1.6*	Vishay	DFN2020MD-6 (SOT1220)	6
MICRO FOOT*	Vishay	DFN2020MD-6 (SOT1220)	6
MicroFET	FalRchild	DFN2020MD-6 (SOT1220)	6
MicroFET 1.6 x 1.6*	FalRchild	DFN2020MD-6 (SOT1220)	6
MiniMelf	Diodes Inc.	SOD80C	2
MiniMelf	ST	SOD80C	2
MiniMelf	Vishay	SOD80C	2
MP-25(K)	Renesas	TO-220 (SOT78)	3
MP-25SK	Renesas	I2PAK (SOT226)	3
MP-25ZT	Renesas	D2PAK (SOT404)	3
MP6	Renesas	DSN0603-2 (SOD962)	2
MPAK	Renesas	SOT23	3
MPAK-4R	Renesas	SOT143B	4
MPT3	Rohm	SOT89	3
PG-TD SON-8	Infineon	LFPAK56 (SOT669)	5
PG-TD- SON-8	Infineon	LFPAK56E (SOT1023)	4
PG-TDSON-8	Infineon	LFPAK56D (SOT1205)	8
PG-TDSON-8	Infineon	LFPAK56 (SOT669)	4
PG-TO220-3	Infineon	TO-220 (SOT78)	3
PG-TO262-3	Infineon	I2PAK (SOT226)	3
PG-TO263-3	Infineon	D2PAK (SOT404)	3
PG-TSDSON-8	Infineon	LFPAK33 (SOT1210)	8
PMDT	Rohm	SOD128	2
PMDU	Rohm	SOD123W	2
Power DI3333-8	Diodes Inc.	LFPAK33 (SOT1210)	8
Power DI5060-8	Diodes Inc.	LFPAK56D (SOT1205)	8
Power DI5060-8	Diodes Inc.	LFPAK56 (SOT669)	4
Power FLAT 3.3 x 3.3	ST	LFPAK33 (SOT1210)	8
Power FLAT 5x6 Dual	ST	LFPAK56D (SOT1205)	8
Power FLAT 5x6 Dual	ST	LFPAK56 (SOT669)	4
Power- Di5060-8	Diodes Inc	LFPAK56E (SOT1023)	4
Power- FLAT (6x5)	ST	LFPAK56E (SOT1023)	4
Power88 (DFNW-8)	ON Semi	LFPAK88 (SOT1235)	4
PowerDI123	Diodes Inc.	SOD123F	2
PowerDI123	Diodes Inc.	SOD123W	2
PowerDI323	Diodes Inc.	SOD323F	2
PowerDi5	Diodes Inc.	CFP15/B (SOT1289/B)	3

Type	Competitor	Nexperia	Pins/Leads
PowerFLAT (6 x 5)	ST	LFPAK56 (SOT669)	5
PowerFLAT (6 x 5)	ST	LFPAK56D (SOT1205)	5
PowerPAK 1212-8	Vishay	LFPAK33 (SOT1210)	8
PowerPAK 8x8L	Vishay	LFPAK88 (SOT1235)	4
PowerPAK SC-70	Vishay	DFN2020-6 (SOT1118)	6
PowerPAK SC-70	Vishay	DFN2020MD-6 (SOT1220)	6
PowerPak SC-70-6L	Vishay	DFN2020-6 (SOT1118)	6
PowerPak SC-75-6L*	Vishay	DFN2020MD-6 (SOT1220)	6
PowerPAK SC-75*	Vishay	DFN2020MD-6 (SOT1220)	6
PowerPAK SC706L	Vishay	DFN2020-3 (SOT1061)	3
PowerPAK SO-8	Vishay	LFPAK56 (SOT669)	5
PowerPAK SO-8(L)	Vishay	LFPAK56 (SOT669)	4
PowerPAK SO-8(L)	Vishay	LFPAK56E (SOT1023)	4
PowerPAK SO-8L Dual	Vishay	LFPAK56D (SOT1205)	8
PW-Mini	Toshiba	SOT89	3
S-Flat	Toshiba	SOD123F	2
S-Flat	Toshiba	SOD123W	2
S-Mini	Toshiba	SOT23	3
S-Mini TSM	Toshiba	SOT23	3
S08	Vishay	SOT96	8
SC-70	ON Semi	SOT323	3
SC-70, 3 leads	Vishay	SOT323	3
SC-74 TSOP-6	ON Semi	SOT457	6
SC-75	ON Semi	DFN1006-3 (SOT883)	3
SC-75	Semtech	DFN1006-3 (SOT883)	3
SC-75A	Vishay	DFN1006-3 (SOT883)	3
SC-88	ON Semi	SOT363	6
SC-88A	ON Semi	SOT353	5
SC2	Toshiba	DSN0603-2 (SOD962)	2
SC59	Diodes Inc.	SOT23	3
SC70	ON Semi	SOT323	3
SC70-3	AOS	SOT323	3
SC70-3	Vishay	SOT323	3
SC70-5L	Semtech	SOT353	5
SC70-6	AOS	SOT363	6
SC70-6	FalRchild	SOT363	6
SC70-6	Vishay	SOT363	6
SC70-6L	Semtech	SOT363	6
SC74 TSOP6	Infineon	SOT457	6
SC75	Infineon	DFN1006-3 (SOT883)	3
SC75	ON Semi	DFN1006-3 (SOT883)	3
SC75A	Vishay	DFN1006-3 (SOT883)	3
SC79	Infineon	SOD523	2

Types with \* show footprint compatibility only

## Package cross reference list

Type	Competitor	Nexperia	Pins/ Leads
SC88/SC 7 0-6/SOT 363 6 LEAD	ON Semi	SOT363	6
SC89-3	FalRchild	DFN1006-3 (SOT883)	3
SC89-3	ON Semi	DFN1006-3 (SOT883)	3
SC89-3	Vishay	DFN1006-3 (SOT883)	3
SGP0603P2X3	Semtech	DFN0603-2 (SOD972E)	2
SL2	Toshiba	DFN0603-2 (SOD972E)	2
SLP0402P2X3	Semtech	DSN0402-2 (SOD992)	2
SLP1006P2	Semtech	DFN1006-2 (SOD882)	2
SLP1006P2T	Semtech	DFN1006D-2 (SOD882D)	2
SLP1006P3	Semtech	DFN1006-3 (SOT883)	3
SLP1006P3T	Semtech	DFN1006B-3 (SOT883B)	3
SLP1610N2	Semtech	DFN1608D-2 (SOD1608)	2
SLP1610P4	Semtech	DFN2510A-10 (SOT1176)	10
SLP1713P8	Semtech	DFN1714-8 (SOT1166)	8
SLP1713P8	Semtech	DFN1714U-8 (SOT983)	8
SLP2513P12	Semtech	DFN2514-12 (SOT1167)	12
SLP3313P16	Semtech	DFN3314-16 (SOT1168)	16
SM6 VS-6	Toshiba	SOT457	6
SMA flat	ST	SOD128	2
SMD TO-263	Renesas	D2PAK (SOT404)	3
SMD0402	Rohm	DSN0402-2 (SOD992)	2
SMD6/SMT6	Rohm	SOT457	6
SMD6/SMZ6	Rohm	SOT457	6
SMPAK	Renesas	DFN1006-3 (SOT883)	3
SMPC TO-277A	Vishay	CFP15/B (SOT1289/B)	3
SMT3	Rohm	SOT23	3
SMT5*	Rohm	SOT457	6
SMT6	Rohm	SOT457	6
SMZ6/SMD6	Rohm	SOT457	6
SO-8 FL	ON Semi	LFPK56 (SOT669)	5
SO-8 FL, DFN-5	ON Semi	LFPK56E (SOT1023)	4
SO-8FL Dual	ON Semi	LFPK56D (SOT1205)	8
SO-8FL Dual	ON Semi	LFPK56 (SOT669)	4
SOD-123	ST	SOD123F	2
SOD-123-FL	ON Semi	SOD123W	2
SOD-323	Diodes Inc.	SOD323	2
SOD-323	ON Semi	SOD323	2
SOD-323	ST	SOD323	2
SOD-523	ON Semi	SOD523	2
SOD-523	ST	SOD523	2
SOD323	Infineon	SOD323	2
SOD323	Semtech	SOD323	2

Type	Competitor	Nexperia	Pins/ Leads
SOD323	Vishay	SOD323	2
SOD523	Diodes Inc.	SOD523	2
SOD523	Semtech	SOD523	2
SOD523	Vishay	SOD523	2
SOD882	ST	DFN1006-2 (SOD882)	2
SOD882T	ST	DFN1006D-2 (SOD882D)	2
SOD923-2*	ON Semi	DFN1006-2 (SOD882)	2
SOIC-8 NB	ON Semi	SOT96	8
SON 2x2	Texas Instruments	DFN2020MD-6 (SOT1220)	6
SON 3 x 3*	Texas Instruments	DFN2020MD-6 (SOT1220)	6
SOP / DSOP Advance	Toshiba	LFPK56E (SOT1023)	4
SOP / DSOP Advance	Toshiba	LFPK56 (SOT669)	4
SOP-8	Renesas	SOT96	8
SOP8	Rohm	SOT96	8
SOT 143	Infineon	SOT143B	4
SOT-143	Diodes Inc.	SOT143B	4
SOT-143	Semtech	SOT143B	4
SOT-223	Diodes Inc.	SOT223	4
SOT-223	Infineon	SOT223	4
SOT-223	ON Semi	SOT223	4
SOT-223	ST	SOT223	4
SOT-23	Diodes Inc.	SOT23	3
SOT-23	ON Semi	SOT23	3
SOT-323	Diodes Inc.	SOT323	3
SOT-323	ST	SOT323	3
SOT-363	Diodes Inc.	SOT363	6
SOT-89	ON Semi	SOT89	3
SOT063*	ON Semi	DFN1010B-6 (SOT1216)	6
SOT223	Diodes Inc.	SOT223	4
SOT223	FalRchild	SOT223	4
SOT223	Infineon	SOT223	4
SOT223	ON Semi	SOT223	4
SOT223	Vishay	SOT223	4
SOT23	AOS	SOT23	3
SOT23	Diodes Inc.	SOT23	3
SOT23	Infineon	SOT23	3
SOT23	ON Semi	SOT23	3
SOT23	Semtech	SOT23	3
SOT23	ST	SOT23	3
SOT23	Vishay	SOT23	3
SOT23-3	AOS	SOT23	3
SOT23-3	Diodes Inc.	SOT23	3
SOT23-3	ON Semi	SOT23	3

Types with \* show footprint compability only

## Package cross reference list

Type	Competitor	Nexperia	Pins/ Leads
SOT23-5	AOS	SOT457	6
SOT23-5	Diodes Inc.	SOT457	6
SOT23-6	Diodes Inc.	SOT457	6
SOT23-6	ST	SOT457	6
SOT23-6L	Semtech	SOT457	6
SOT23F	Diodes Inc.	SOT23	3
SOT23F	Toshiba	SOT23	3
SOT26	Diodes Inc.	SOT457	6
SOT323	Diodes Inc.	SOT323	3
SOT323	FalRchild	SOT323	3
SOT323	Infineon	SOT323	3
SOT353	Diodes Inc.	SOT353	5
SOT353	Diodes Inc.	SOT363	6
SOT353	Vishay	SOT353	5
SOT363	Diodes Inc.	SOT363	6
SOT363	Infineon	SOT363	6
SOT523	Diodes Inc.	DFN1006-3 (SOT883)	3
SOT523F	FalRchild	DFN1006-3 (SOT883)	3
SOT723-3*	ON Semi	DFN1010D-3 (SOT1215)	3
SOT723*	ON Semi	DFN1010D-3 (SOT1215)	3
SOT89	Diodes Inc.	SOT89	3
SOT89	Infineon	SOT89	3
SOT89-3L	Diodes Inc.	SOT89	3
SOT963	ON Semi	DFN1010-6 (SOT891)	6
SOT963*	Diodes Inc.	DFN1010B-6 (SOT1216)	6
SRP-F	Renesas	SOD123W	2
SS CSP2	Toshiba	DFN1006-3 (SOT883)	3
SSD3/SST3	Rohm	SOT23	3
SSM	Toshiba	DFN1006-3 (SOT883)	3
SSOT3	FalRchild	SOT23	3
SSOT6	FalRchild	SOT457	6
SSOT6 FLMP	FalRchild	SOT457	6
SST3	Rohm	SOT23	3
SST3/SSD3	Rohm	SOT23	3
ST01005	STM	DSN0402-2 (SOD992)	2
Strmite flat	ST	SOD123W	2
sTOLL (PG-HSOF-5)	Infineon	LFPK88 (SOT1235)	4
T0263	Diodes Inc.	D2PAK(SOT404)	3
T0263-3	Infineon	D2PAK (SOT404)	3
Thin PowerPAK SC-70	Vishay	DFN2020-6 (SOT1118)	6
Thin PowerPAK SC70	Vishay	DFN2020MD-6 (SOT1220)	6
Thin PowerPAK SC75*	Vishay	DFN2020MD-6 (SOT1220)	6
TO-220	ST	TO-220 (SOT78)	3

Type	Competitor	Nexperia	Pins/ Leads
TO-220	Toshiba	TO-220 (SOT78)	3
TO-220	Vishay	TO-220 (SOT78)	3
TO-220-3	ON Semi	TO-220 (SOT78)	3
TO-220-3L	ON Semi	TO-220 (SOT78)	3
TO-220AB	Vishay	TO-220 (SOT78)	3
TO-220F-3FS	ON Semi	TO-220 (SOT78)	3
TO-220FM	Rohm	TO-220 (SOT78)	3
TO-220S	Renesas	D2PAK (SOT404)	3
TO-220SM	Toshiba	D2PAK (SOT404)	3
TO-262	Renesas	I2PAK (SOT226)	3
TO-262	Vishay	I2PAK (SOT226)	3
TO-262-2L	ON Semi	I2PAK (SOT226)	3
TO-262-3L	ON Semi	I2PAK (SOT226)	3
TO-263	Renesas	D2PAK-7 (SOT427)	7
TO-263	Renesas	D2PAK (SOT404)	3
TO-263	Vishay	D2PAK (SOT404)	3
TO-263 3-lead	Vishay	D2PAK (SOT404)	3
TO-263-2L	ON Semi	D2PAK (SOT404)	3
TO-263AB	Vishay	D2PAK (SOT404)	3
TO-LL	ON Semi	LFPK88 (SOT1235)	4
TO-LL (PG-HSOF-8-1)	Infineon	LFPK88 (SOT1235)	4
TO220	Infineon	TO-220 (SOT78)	3
TO220-3	Diodes Inc.	TO-220 (SOT78)	3
TO262	Infineon	I2PAK (SOT226)	3
TO263	Diodes Inc.	D2PAK (SOT404)	3
TOLG (PG-HSOG-8)	Infineon	LFPK88 (SOT1235)	4
TSLP-2-1	Infineon	DFN1006-2 (SOD882)	2
TSLP-2-7/-17	Infineon	DFN1006D-2 (SOD882D)	2
TSLP-3-1, -15	Infineon	DFN1006B-3 (SOT883B)	3
TSLP-3-4	Infineon	DFN1006-3 (SOT883)	3
TSLP-9-1	Infineon	DFN2510A-10 (SOT 1176)	10
TSMT5*	Rohm	SOT457	6
TSMT6	Rohm	SOT457	6
TSNP-2-2	Infineon	DFN1608D-2 (SOD 1608)	2
TSON Advance	Toshiba	LFPK33 (SOT1210)	8
TSOP-6	Renesas	SOT457	6
TSOP-6/ TSOP6	Vishay	SOT457	6
TSOP6	AOS	SOT457	6
TSOP6	ON Semi	SOT457	6
TSOP6	Vishay	SOT457	6
TSSLP-2-1	Infineon	DSN0603-2 (SOD962)	2
TSST8*	Rohm	DFN2020MD-6 (SOT1220)	6
TUMT3	Rohm	SOT323	3

Types with \* show footprint compatibility only

## Package cross reference list

Type	Competitor	Nexperia	Pins/ Leads
TUMT5*	Rohm	DFN2020-6 (SOT1118)	6
TUMT6*	Rohm	DFN2020-6 (SOT1118)	6
U-DFN2020-3 Type B 2.0 x 2.0 x 0.6	Diodes Inc.	DFN2020-3 (SOT1061)	3
U-DFN2020-6	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
U-DFN2523-6*	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
U-WLB1510-6	Diodes Inc.	WLCSP6	6
U-WLB1515-9	Diodes Inc.	WLCSP9	9
U-WLB1515-9 (Type B)	Diodes Inc.	WLCSP9	9
U-WLB1515-9 (Type E)	Diodes Inc.	WLCSP9	9
UDFN 1.7 x 1.35, 0.4P	ON Semi	DFN1714U-8 (SOT983)	8
UDFN-6 WDFN6	ON Semi	DFN2020MD-6 (SOT1220)	6
UDFN10 2.5 x 1, 0.5P	ON Semi	DFN2510A-10 (SOT1176)	10
UDFN12 2.5 x 1.35, 0.4P	ON Semi	DFN2514-12 (SOT1167)	12
UDFN2020-6 Type B	Diodes Inc.	DFN2020-6 (SOT1118)	6
UDFN2020-6 Type E	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
UDFN6	ON Semi	DFN2020MD-6 (SOT1220)	6
UDFN6	Toshiba	DFN2020-6 (SOT1118)	6
UDFN6B	Toshiba	DFN2020MD-6 (SOT1220)	6
UF6	Toshiba	SOT363	6
UF6/ USV/ US6	Toshiba	SOT363	6
UFP	Renesas	SOD523	2
UMD2	Rohm	SOD323F	2
UMD3/UMT3	Rohm	SOT323	3
UMD5/UMT5	Rohm	SOT353	5
UMD6/ UMT6	Rohm	SOT363	6
UMLP 1.6 x 1.6*	Falrchild	DFN2020MD-6 (SOT1220)	6
UMT3	Rohm	SOT323	3
UMT3F*	Rohm	SOT323	3
UMT5/ UMD5	Rohm	SOT353	5
UMT6	Rohm	SOT363	6
UMT6/ UMD6	Rohm	SOT363	6
UPAK (SOT89)	Renesas	SOT89	3
URP	Renesas	SOD323	2
US-Flat	Toshiba	SOD323F	2
US6	Toshiba	SOT363	6
US6/ UF6/ USV	Toshiba	SOT363	6
use	Toshiba	SOD323	2
USM	Toshiba	SOT323	3
USV	Toshiba	SOT353	5
USV	Toshiba	SOT363	6
USV/ US6/ UF6/	Toshiba	SOT363	6
VESM*	Toshiba	DFN1010D-3 (SOT1215)	3

Type	Competitor	Nexperia	Pins/ Leads
VML0806*	Rohm	DFN1006B-3 (SOT883B)	3
VML1006	Rohm	DFN1006-3 (SOT883)	3
VMN2*	Rohm	DFN1006-2 (SOD882)	2
VMN2*	Rohm	DFN1006D-2 (SOD882D)	2
VMN3*	Rohm	DFN1006-3 (SOT883)	3
VMT3*	Rohm	DFN1010D-3 (SOT1215)	3
VMT6*	Rohm	DFN1010B-6 (SOT1216)	6
VS6	Toshiba	SOT457	6
W-DFN3020-8*	Diodes Inc.	DFN2020-6 (SOT1118)	6
WCSP6C	Toshiba	WLCSP6	6
WDFN-8	ON Semi	LFPK33 (SOT1210)	8
WDFN3	ON Semi	DFN2020-3 (SOT1061)	3
WDFN6	ON Semi	DFN2020-6 (SOT1118)	6
WDFN6	ON Semi	DFN2020MD-6 (SOT1220)	6
WLCSP 1 x 1*	Falrchild	WLCSP4	3
WLCSP-4*	Falrchild	WLCSP4	3
WLCSP-4*	ON Semi	WLCSP4	3
WLCSP1.6 x 1.6*	AOS	WLCSP6	6
WLCSP2	ON Semi	DSN0603-2 (SOD962)	2
WLL-2-2	Infineon	DSN0402-2 (SOD992)	2
WLL-2-2	Infineon	DSN0402B-2 (SOD992B)	2
WLP 1.0 x 1.5	Texas Instruments	WLCSP6	6
WLP1.5 x 1.5*	Texas Instruments	DFN2020MD-6 (SOT1220)	6
WLPI.O x 1.0*	Texas Instruments	DFN1010D-3 (SOT1215)	3
WLPI.O x 1.5*	Texas Instruments	DFN2020MD-6 (SOT1220)	6
X1 -DFN 1006-3	Diodes Inc.	DFN1006-3 (SOT883)	3
X1-DFN1212-3*	Diodes Inc.	DFN1010D-3 (SOT1215)	3
X1-DFN1616-6*	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
X1-WLB0808-4	Diodes Inc.	WLCSP4	4
X2-DFN0606-3	Diodes Inc.	DFN0606 (SOT8001)	3
X2-DFN0806-3	Diodes Inc.	DFN1006-3 (SOT883)	3
X2-DFN1006-2	Diodes Inc.	DFN1006D-2 (SOD882D)	2
X2-DFN1006-3	Diodes Inc.	DFN1006B-3 (SOT883B)	3
X2-DFN1010-3	Diodes Inc.	DFN1010D-3 (SOT1215)	3
X2-DFN1310-6*	Diodes Inc.	DFN1010B-6 (SOT1216)	6
X2-DFN2015-3*	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
X2-DFN2020-6	Diodes Inc.	DFN2020MD-6 (SOT1220)	6
X2-WLB0808-4	Diodes Inc.	WLCSP4	4
X2-WLB0808-4 (Type B)	Diodes Inc.	WLCSP4	4
X3-DFN0603-2	Diodes Inc.	DFN0603-2 (SOD972E)	2
X3-DFN0603-2	Diodes Inc.	DSN0603-2 (SOD962)	2
X3DFN-2	ON Semi	DSN0603-2 (SOD962)	2
X3DFN2	ON Semi	DFN0603-2 (SOD972E)	2

Types with \* show footprint compability only

## Package cross reference list

Type	Competitor	Nexperia	Pins/ Leads
XDFN3	ON Semi	DFN1006-3 (SOT883)	3
XI-DFN1006-2	Diodes Inc.	DFN1006-2 (SOD882)	2
XLLGA-3	ON Semi	DFN0606 (SOT8001)	3
μ8FL	ON Semi	LFPAK33 (SOT1210)	8
μQFN-10L	ST	DFN2510A-10 (SOT1176)	10
μQFN-2L	ST	DFN1006-2 (SOD882)	2

Types with \* show footprint compability only

## Package cross reference matrix

Pins/ leads	Nexperia	Industry standard names	Size (l x w x h) (mm)	P <sub>tot</sub> (mW)	Package	Competitor synonyms								
						Rohm	Toshiba	ON Semi	Renesas	Infineon	Diodes Inc	ST	Vishay	Semtech
2	DSN0402-2 (SOD992)		0.4 x 0.2 x 0.12			SMD0402	CL2	DSN2 0.4 x 0.2				ST01005		SLP-0402P2X3
	DSN0402B-2 (SOD992B)		0.43 x 0.23 x 0.12											
	DFN0603-2 (SOD972E)		0.63 x 0.33 x 0.25				SL2	X3DFN2			X3-DFN0603-2			SGP-0603P2X3
	DSN1006-2 (SOD993)		1.0 x 0.6 x 0.3					DSN2 1.0 x 0.6						
	DSN1006U-2 (SOD995)		1.0 x 0.6 x 0.3					DSN2 1.0 x 0.6						
	DFN1006-2 (SOD882)		1.0 x 0.6 x 0.48	250		(VMN2)	CTS2 (fSC)	(SOD923-2)		TSLP-2-1	XI-DFN1006-2	SOD 882 uQFN-2L	LLP1006-2L	SLP1006P2
	DFN1006D-2 (SOD882D)		1.0 x 0.6 x 0.37	250		(VMN2)	CTS2 (fSC)	DSN2 1.0 x 0.6		TSLP-2-7/ -17	X2-DFN1006-2	SOD882T	LLP1006-2L LLP1006-2M	SLP1006P2T
	DFN1608D-2 (SOD1608)		1.6 x 0.8 x 0.37	780		KMD2		DSN2 1.6 x 0.8		TSNP-2-2				SLP1610N2
	DSN0603-2 (SOD962)		0.6 x 0.3 x 0.3	525		GMD2	SC2	DSN2, X3DFN-2 WLCSP2	MP6	TSSLP-2-1	X3-DFN0603-2	DFN2	CLP0603	SLP-0603P2X3
	SOD80C	Mini-Melf	3.5 x 1.5 x 1.5	300		LLDS			LLD		MiniMelf	MiniMelf	MiniMelf	
	SOD123F		2.6 x 1.6 x 1.1	830			S-Flat	SOD-123-FL			PowerDI123	SOD-123		
	CFP3 (SOD123W)		2.6 x 1.7 x 1.0	950		PMDU	S-Flat	SOD-123-FL	SRP-F		PowerDI123	Stmite flat		
	CFP5 (SOD128)		3.8 x 2.5 x 1.0	1050		PMDT	M-Flat					SMA flat		
	SOD323	SC-76	1.7 x 1.25 x 0.95	400			USC	SOD-323	URP	SOD323	SOD-323	SOD-323	SOD323	SOD323
	SOD323F	SC-90	1.7 x 1.25 x 0.7	830		UMD2	US-Flat				PowerDI323			
SOD523	SC-79	1.2 x 0.8 x 0.6	500		EMD2	ESC/TESS	SOD-523	UFP	SC79	SOD523	SOD-523	SOD523	SOD523	
3	CFP15 (SOT1289)		5.8 x 4.3 x 0.78	2150							PowerDi5		SMPC TO-277A	
	CFP15B (SOT1289B)		5.8 x 4.3 x 0.95	2150							PowerDi5		SMPC TO-277A	
	DFN1006-3 (SOT883)	SC-101	1.0 x 0.6 x 0.48	250		VML1006	SS CSP2	XDFN3		TSLP-3-4	X1 -DFN 1006-3		SLP1006P3	
	DFN1006B-3 (SOT883B)		1.0 x 0.6 x 0.37	250		VML1006	CST3	XDFN3		TSLP-3-1, -15	X2-DFN1006-3		SLP1006P3T	
	DFN1010D-3 (SOT1215)		1.1 x 1.0 x 0.37	325		(VMT3)	(VESM)	(SOT723)			X2-DFN1010-3			
	DFN2020-3 (SOT1061)	HUSON3	2.0 x 2.0 x 0.62	1300				WDFN3			U-DFN2020-3 Type B 2.0 x 2.0 x 0.6		PowerPAK SC706L	
	DFN2020D-3 (SOT1061D)		2.0 x 2.0 x 0.62	1300				WDFN3			U-DFN2020-3 Type B 2.0 x 2.0 x 0.6		PowerPAK SC706L	
	D2PAK (SOT404)		11.0 x 11.0 x 4.3			LPDS/ LPTS	TO-220SM D2PAK	D2PAK D2PAK 3 TO-263-2L	TO-220S/ SMD TO-263 LDPK(S)-(1) MP-2SZ	D2PAK, PG- T0263-3	T0263 (D2PAK)	D2PAK, H2PAK-2	TO-263 3-lead TO-263AB/ D2PAK TO-263	
	SOT23		2.9 x 1.3 x 1.0	250		SSD3/ SST3	S-Mini TSM	SOT-23	MPAK	SOT23	SOT-23	SOT23	SOT23	SOT23
	SOT89	SC-62	4.5 x 2.5 x 1.5	1300		MPT3	PW-Mini	SOT-89	UPAK (SOT89)	SOT89	SOT89			
SOT323	SC-70	2.0 x 1.25 x 0.95	200		UMD3/ UMT3 TUMT3	USM	SC-70	CMAK/ CMPAK	SOT323	SOT-323	SOT-323	SC-70 3 leads	SOT-323	

Types in brackets (...) show footprint compatibility only







## Package cross reference matrix

Pins/ leads	Nexperia	Industry standard names	Size (l x w x h) (mm)	P <sub>tot</sub> (mW)	Package	Competitor synonyms								
						Rohm	Toshiba	ON Semi	Renesas	Infineon	Diodes Inc	ST	Vishay	Semtech
3	TO-220 (SOT78)		15.6 x 10 x 4.4			TO-220FM	TO-220	TO-220-3L, TO-220F-3F5, TO-220-3	MP-25(K)	PG-TO220-3, TO220	TO220-3	TO-220	TO-220, TO- 220AB	
	I2PAK (SOT226)		11 x 10 x 4.3					I2PAK, TO-262-2L, TO-262-3L	MP-25SK, TO-262	PG-TO262-3, TO262		I2PAK	TO-262	
4	LFPAK56 (SOT669)	Power- S08	4.9 x 4.45 x 1.0	395W		HSOP8 (Single)	SOP / DSOP Advance	SO-8 FL, DFN-5, LFPAK4	LFPAK56, HSON-8	PG-TD- SON-8	Power- Di5060-8	Power- FLAT (6x5)	PowerPAK SO-8(L)	
	SOT143B		2.9 x 1.3 x 1.0	250			CP4		MPAK-4R	SOT143	SOT-143		SOT-143	
	LFPAK56E (SOT1023)		6.2 x 5.3 x 1.1	500W		HSOP8 (Single)	SOP / DSOP Advance	SO-8 FL, DFN-5, LFPAK8	LFPAK56, HSON-8	PG-TD- SON-8	Power- Di5060-8	Power- FLAT (6x5)	PowerPAK SO-8(L)	
	SOT223	SC-73	6.5 x 3.5 x 1.65	1700				SOT-223		SOT223	SOT-223		SOT223	
LFPAK88 (SOT1235)		8 x 8 x 1.6	375W			D2PAK+	TO-LL Power88 D2PAK-3 D2PAK-7		TO-LL sTOLL TOLG D2PAK D2PAK7P		D2PAK H2PAK-2 H2PAK-6	PowerPAK 8x8L D2PAK-3 D2PAK-7		
5	SOT353	SC-88 A	2.0 x 1.25 x 0.95	300		UMD5/ UMT5	USV	SC-88 A	CMPAK- 5C0		SOT353		SOT353	SC70-5L
6	DFN1010-6 (SOT891)	XSON6	1.0 x 1.0 x 0.48					CS6	SOT963					
	DFN1010B-6 (SOT1216)		1.1 x 1.0 x 0.37	350		(VMT6)	(FS6)	(SOT063)			(SOT963)			
	DFN1410-6 (SOT886)	XSON6	1.45 x 1.0 x 0.48	250										SLP1510N6
	DFN2020-6 (SOT1118)		2.0 x 2.0 x 0.62	1300		HU- ML2020L8 (Dual)	UDFN6	6 Lead DFN WDFN6			UDFN2020- 6 Type B		PowerPAK SC-70 Thin PowerPAK SC-70	
	DFN2020D-6 (SOT1118D)		2.0 x 2.0 x 0.62	1300		HU- ML2020L8 (Dual)	UDFN6	6 Lead DFN WDFN6			UDFN2020- 6 Type B		PowerPAK SC-70 Thin PowerPAK SC-70	
	DFN- 2020MD-6 (SOT1220)		2.0 x 2.0 x 0.62	1250		HU- ML2020L8 (Single)	UDFN6B	UDFN-6 WDFN6			UDFN2020- 6 Type E		PowerPAK SC-70 Thin PowerPAK SC-70	
	SOT363	SC-88	2.0 x 1.25 x 0.95	300		UMD6/ UMT6	US6 UF6 USV	SC-88	CMPAK-6	SOT363	SOT-363			SC70-6
SOT457	SC-74	2.9 x 1.5 x 1.0	750		SMD6/ SMT6	SM6 VS-6	SC-74 TSOP-6	TSOP-6	SC74 TSOP6	SOT23-6 SOT26			TSOP6 TSOP-6	SOT23-6L
8	LFPAK33 (SOT1210)		3.3 x 3.3 x 0.85	790		HSMT8	TSON Advance	µ8FL, WDFN-8		PG-TSD- SON-8	Power DI3333-8	Power FLAT 3.3 x 3.3	PowerPAK 1212-8	
	LFPAK56D (SOT1205)		4.9 x 4.45 x 1.0	680		HSOP8 (Dual)		SO-8FL Dual, DFN-8	HSON-8 dual	PG-TDSON-8	Power DI5060-8	Power FLAT 5x6 Dual	PowerPAK SO-8L Dual	
	SOT96	S08	4.9 x 3.9 x 1.75	1500		SOP8	FM8	SOIC-8 NB	SOP-8				S08	
	DFN1714-8 (SOT 1166)	HUSON8	1.7 x 1.35 x 0.52											SLP1713P8
	DFN1714U-8 (SOT983)	HXSON8	1.7 x 1.35 x 0.48					UDFN 1.7 x 1.35, 0.4P						SLP1713P8
10	DFN2510-10 (SOT 1165)	XSON10	2.5 x 1.0 x 0.48					UDFN10 2.5 x 1, 0.5P		TSLP-9-1		pQFN-10L		SLP1610P4
	DF- N2510A-10 (SOT1176)	XSON10	2.5 x 1.0 x 0.48					UDFN10 2.5 x 1, 0.5P		TSLP-9-1		pQFN-10L		SLP1610P4
	DFN2626-10 (SOT 1197)		2.6 x 2.6 x 0.48					UDFN10 2.6 x 2.6, 0.5P						SLP2626P10

Types in brackets (...) show footprint compatibility only

## Package cross reference matrix

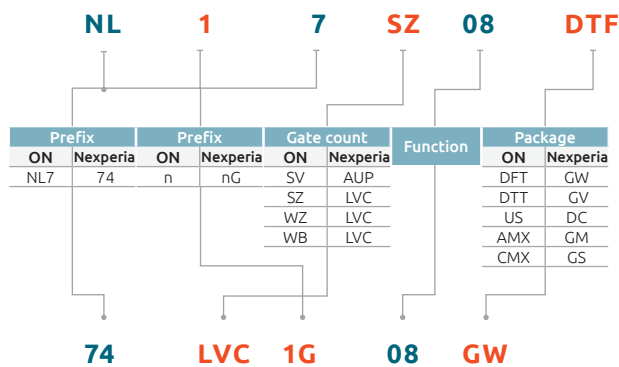
Pins/leads	Nexperia	Industry standard names	Size (L x w x h) (mm)	P <sub>tot</sub> (mW)	Package	Competitor synonyms								
						Rohm	Toshiba	ON Semi	Renesas	Infineon	Diodes Inc	ST	Vishay	Semtech
12	DFN2512-12 (SOT 1158)	HXSON12	2.5 x 1.2 x 0.48					UDFN12, 2.5 x 1.2, 0.4P						
	DFN2514-12 (SOT 1167)	HUSON12	2.5 x 1.35 x 0.53					UDFN12, 2.5 x 1.35, 0.4P						SLP2513P12
16	DFN3312-16 (SOT 1159)	HXSON16	3.3 x 1.2 x 0.48					UDFN 16, 3.5 x 1.2, 0.4P						
	DFN3314-16 (SOT 1168)	HUSON16	3.3 x 1.35 x 0.53											SLP3313P16

Types in brackets (...) show footprint compatibility only

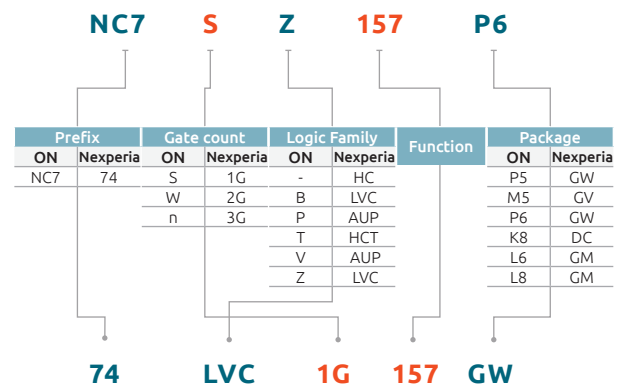
## Competitive cross reference - Analog & logic ICs

This cross reference allows you to match a competitor's part number to a Nexperia part number. Once you have the equivalent part number, check the Nexperia website [www.nexperia.com/logic](http://www.nexperia.com/logic) to confirm that the particular configuration is released.

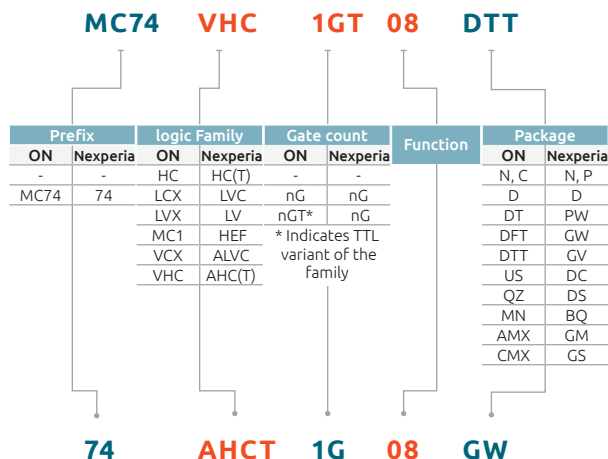
### On semiconductor low pin count logic



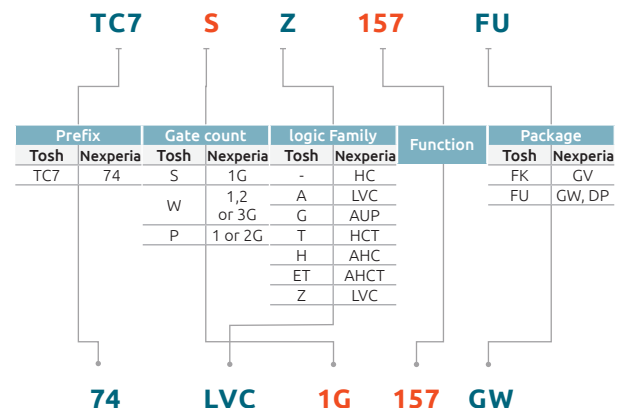
### ON semiconductor tiny logic



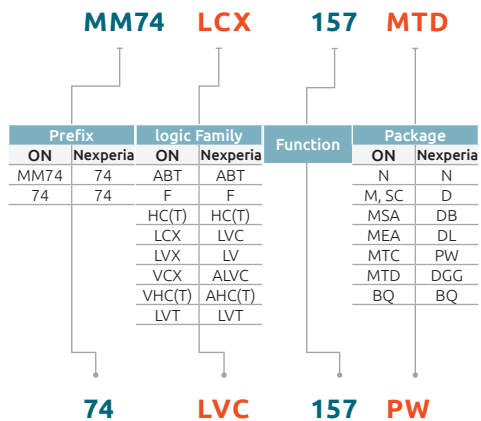
### On semiconductors logic



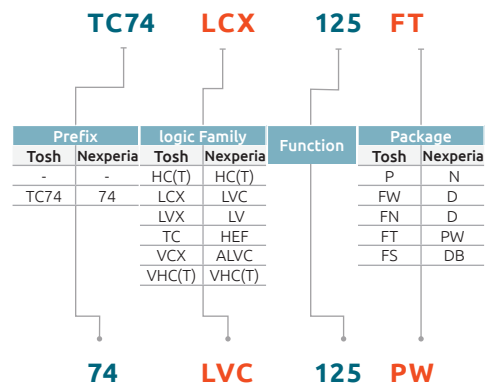
### Toshiba one gate



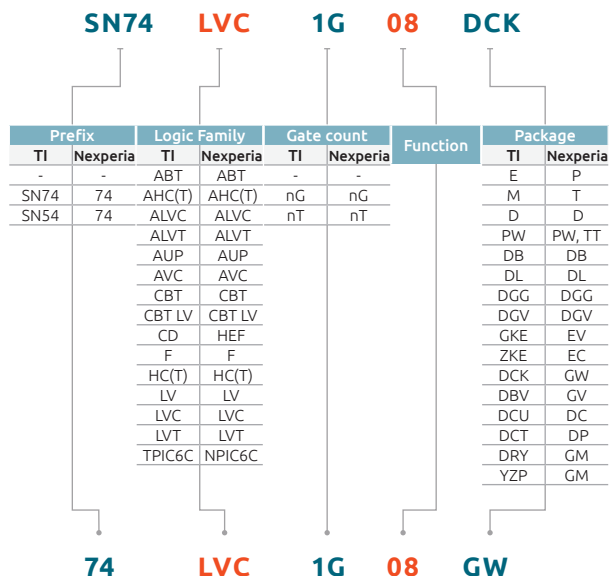
ON semiconductor standard logic



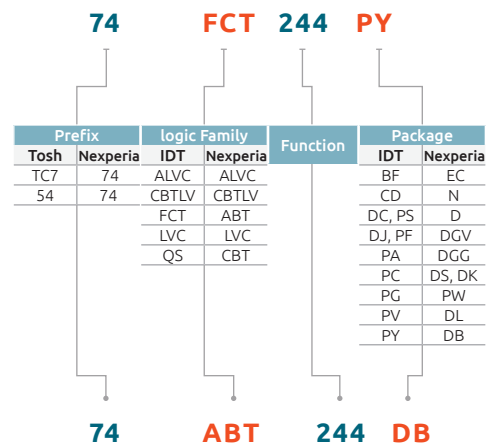
Toshiba standard logic



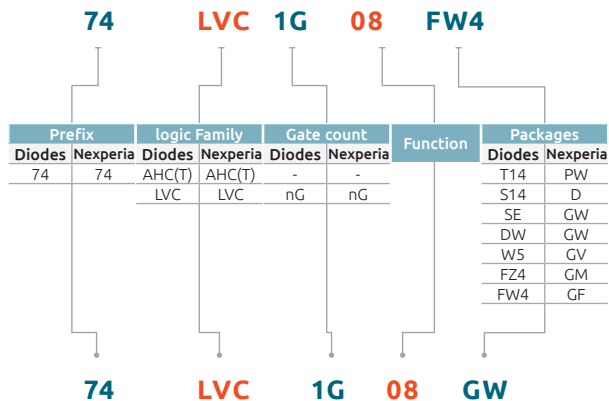
Texas instruments logic



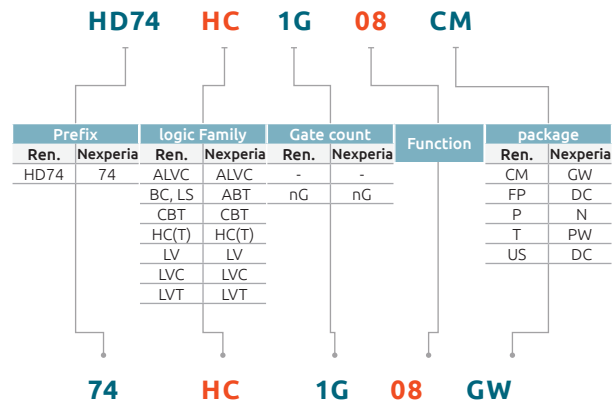
IDT logic



Diodes Inc. logic



Renesas logic



## Product orientation (tape and reel pack)

2 pin packages	Orientation in tape	Package	Packing 12NC ending	
			DFN1006-2 (SOD882)	315
			DFN1006D-2 (SOD882D)	315
			DFN1608D-2 (SOD1608)	315
			DSN0603-2 (SOD962)	315
			DFN0603-2 (SOD972E)	317
			DFN0603-3 (SOT8013)	317
			DSN0402-2 (SOD992)	315
			DSN0402B-2 (SOD992B)	315
			DSN1006-2 (SOD993)	315
			DSN1006-2 (SOD993B)	315
			DSN1006U-2 (SOD995)	315
			DSN1608-2 (SOD963&964)	315
			SOD80	115, 135
			SOD123F	115
		CFP3 (SOD123W)	115	
		SOD123	115, 118	
		CFP5 (SOD128)	115	
		SOD323	115, 135	
		SOD323F	115	
	SOD523	115, 135, 315, 335		

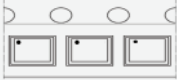



3 pin packages	Orientation in tape	Package	Packing 12NC ending		Orientation in tape	Package	Packing 12NC ending	
		SOT89	146				DFN1010D-3 (SOT1215)	147
							DFN2020-3 (SOT1061)	115, 135
							DFN2020D-3 (SOT1061D)	115, 135
							SOT89	115, 135
							SOT89	115, 135
							D2PAK (SOT404)	118

4 pin packages	Orientation in tape	Package	Packing 12NC ending		Orientation in tape	Package	Packing 12NC ending	
		WLCSP4 (0808)	084					
		LFPAK56 (SOT669)	115					
		LFPAK56E (SOT1023)	115					
		LFPAK56-UL2595 (SOT1023A)	115					
		LFPAK88 (SOT1235)	118					

5 pin packages	Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending
		WLCSP5 (1208)	087		SOT353	115, 135
Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending	
	SOT753	125				
	X2SON5 (SOT1226)	125				
	UMTS (SOT353-1)	125				
	SOS (SOT753)	125				

6 pin packages	Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending
		DFN1410-6 (SOT886)	115		DFN1412-6 (SOT1268)	147
		DFN2020MD-6 (SOT1220)	184		DFN2020D-6 (SOT1118D)	115
		LFPAK33 (SOT1210)	115		DFN2020MD-6 (SOT1220)	115
		LFPAK56D (SOT1205)	115		SOT363	115, 135
		WLCSP6 (1510)	023		SOT457	115, 135
		XSON6 (SOT1202)	125		X2SON6 (SOT1255)	147
		XSON6 (SOT886)	125		DFN0606B-6	147
		DFN1308-6 (SOT8006)	315			
		DFN1308-6 (SOT8006B)	315			
Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending	
	DFN1010-6 (SOT891)	132		DFN0606 (SOT8001)	147	
	DFN1010E-6 (SOT1202)	132				
	DFN1410-6 (SOT886)	132				
	DFN2020MD-6 (SOT1220)	125				
	SOT363	125, 165				
	SOT457	125, 165				
	XSON6 (SOT891)	125				
	SC-88 (SOT363)	125				
	SC-74 (SOT457)	125				

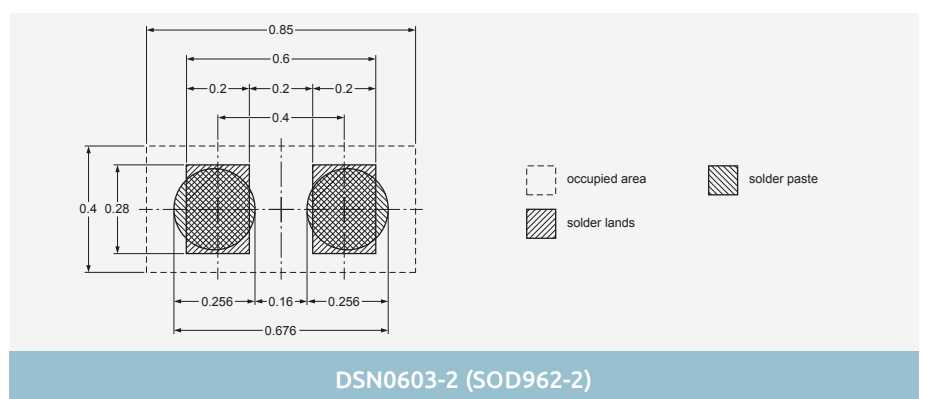
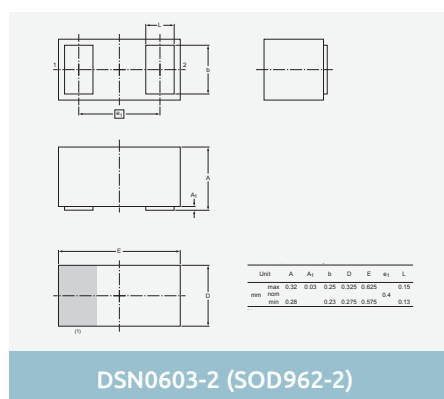
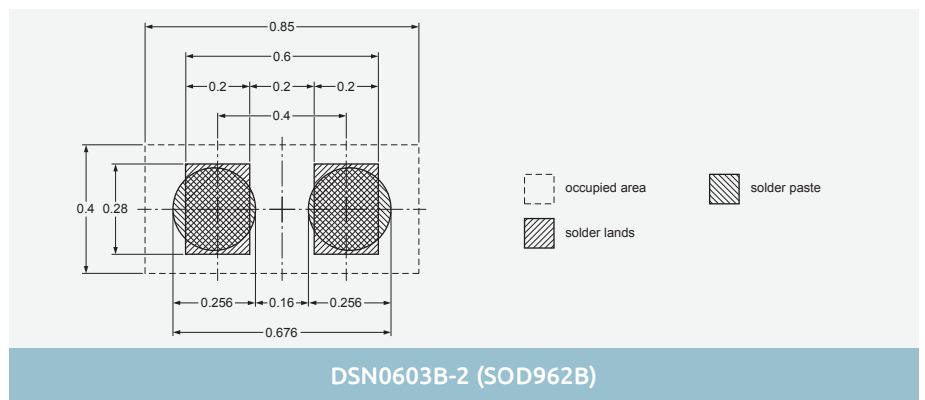
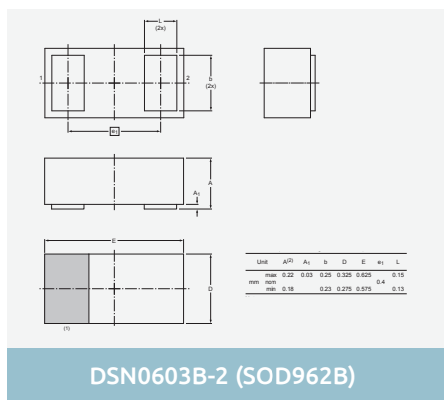
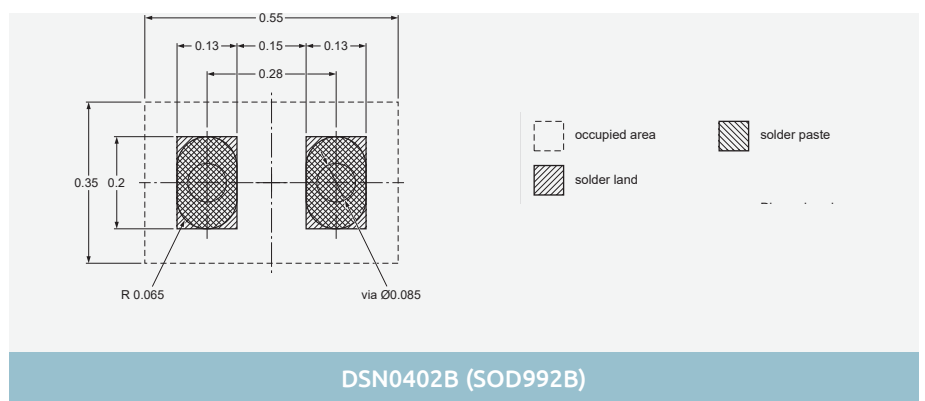
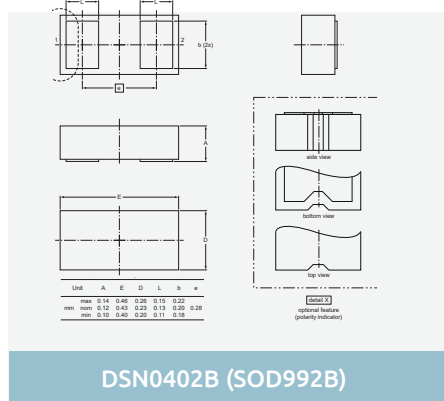
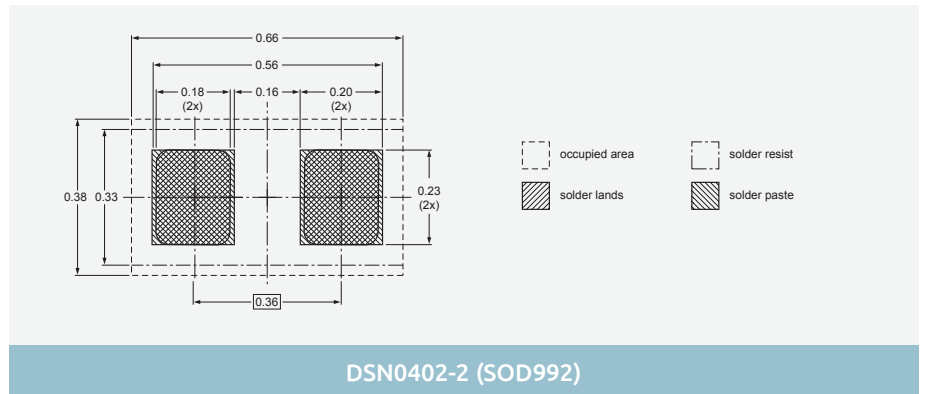
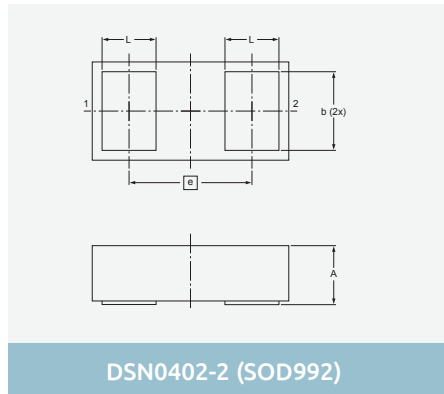
## Packing methods

multi I/O pin packages	Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending		
			DFN2110-9 (SOT1178)	115		DFN0606 (SOT8001)	147	
			DFN2111-7 (SOT1358)	471				
			DFN2510A-10 (SOT1176)	115				
		DFN2520-9 (SOT1333)						
		DFN2520-9 (SOT1333)						
		DFN2520-9 (SOT1333)						
		DFN2520-9 (SOT1333)						
		DFN5050-32 (SOT617-3)						
		XSON8 (SOT1116)	115					
		X2SON8 (SOT1233)	115					
		XSON8 (SOT1203)	115					
		XSON8 (SOT1089)	115					
		XSON8 (SOT833-1)	115					
		TSSOP8 (SOT530-1)	118					
		SO8 (SOT96-1)	118					
		X2QFN10 (SOT1430-1)	471					
		XQFN10 (SOT1337-1)	115					
		TSSOP10 (SOT552-1)	118					
		XQFN10 (SOT1160-1)	115					
		XQFN12 (SOT1174-1)	115					
		DHVQFN14 (SOT762-1)	115					
		TSSOP14 (SOT402-1)	118					
		SSOP16 (SOT519-1)	118					
		TSSOP16 (SOT403-1)	118					
		SO16 (SOT109-1)	118					
		TSSOP20 (SOT360-1)	118					
		SO20 (SOT163-1)	118					
		DHXQFN20 (SOT1045-2)	115					
		DHVQFN20 (SOT764-1)	115					
		SO24 (SOT137-1)	118					
		DHVQFN24 (SOT815-1)	118					
		TSSOP24 (SOT355-1)	118					
		TSSOP48 (SOT362-1)	118					
		TSSOP48 (SOT480-1)	118					
	TSSOP56 (SOT364-1)	118						
	Orientation in tape	Package	Packing 12NC ending	Orientation in tape	Package	Packing 12NC ending		
		XQFN8 (SOT902-2)	125					
		VSSOP8 (SOT765-1)	125					
		TSSOP8 (SOT505-2)	125					



# Minimized outline drawings and reflow soldering footprint

## 2-pin SMD packages

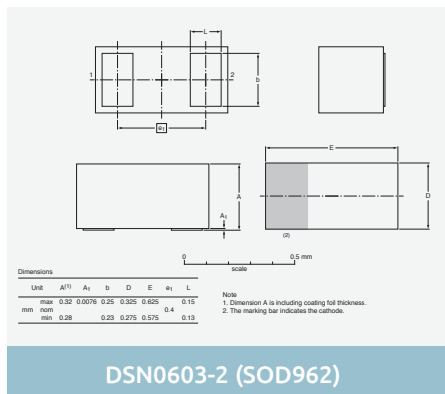


Dimensions in mm

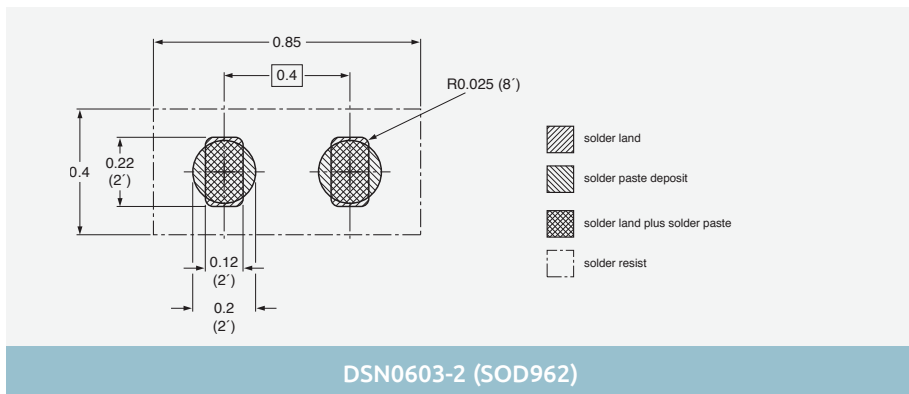
Images are for reference only, for detailed drawings please visit [nexperia.com/packages](http://nexperia.com/packages)



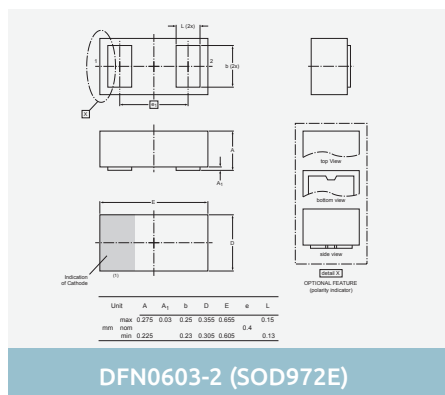
## 2-pin SMD packages



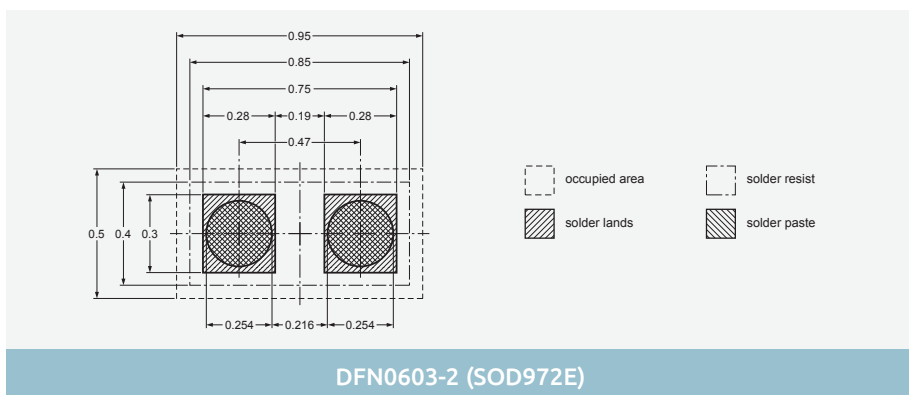
DSN0603-2 (SOD962)



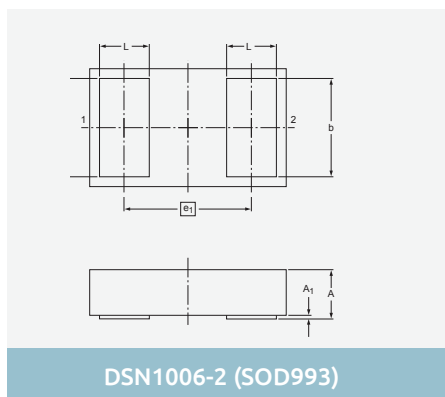
DSN0603-2 (SOD962)



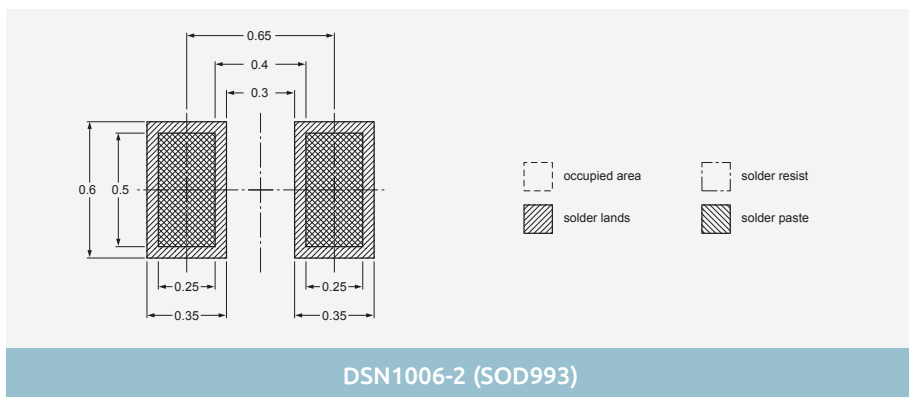
DFN0603-2 (SOD972E)



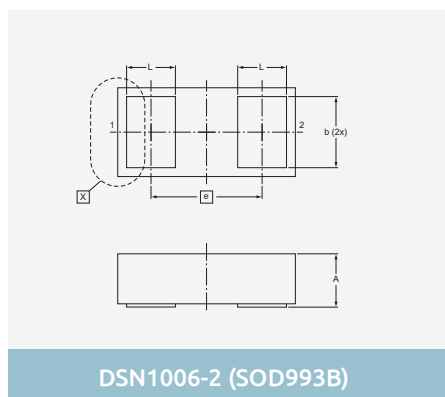
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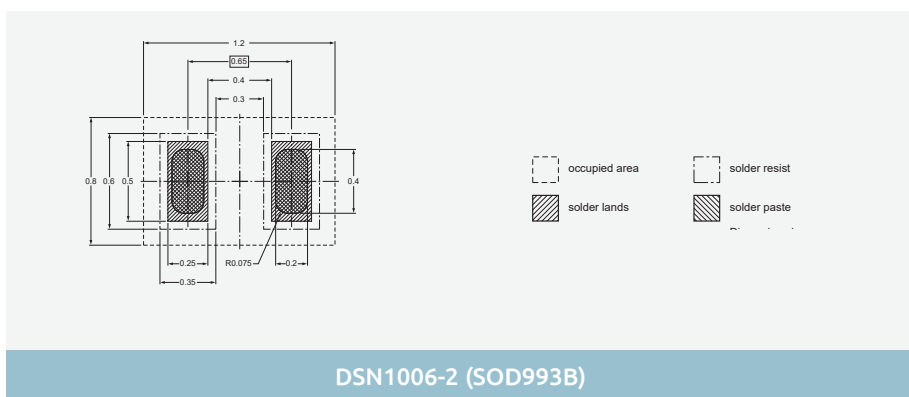
DSN1006-2 (SOD993)



DSN1006-2 (SOD993)



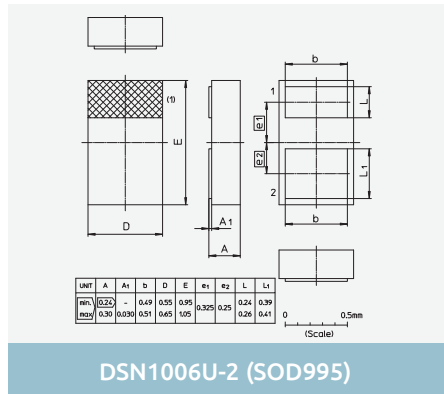
DSN1006-2 (SOD993B)



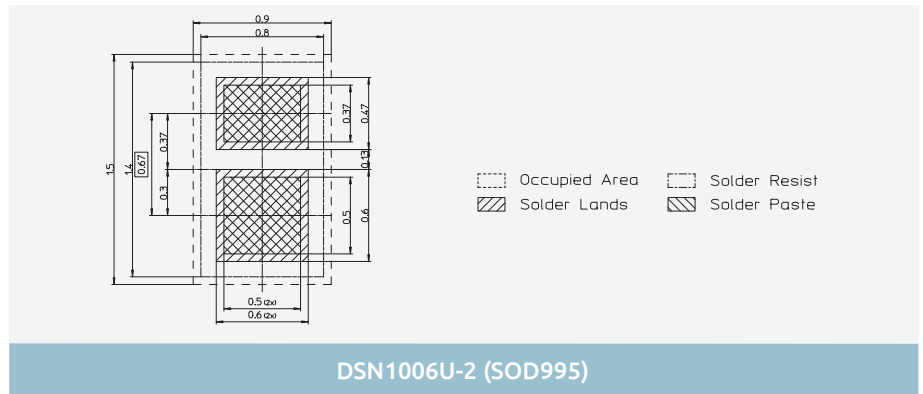
DSN1006-2 (SOD993B)

Dimensions in mm

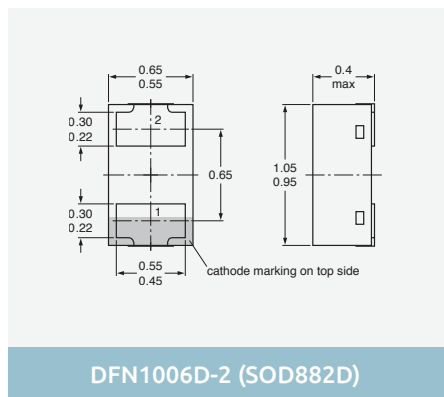
2-pin SMD packages



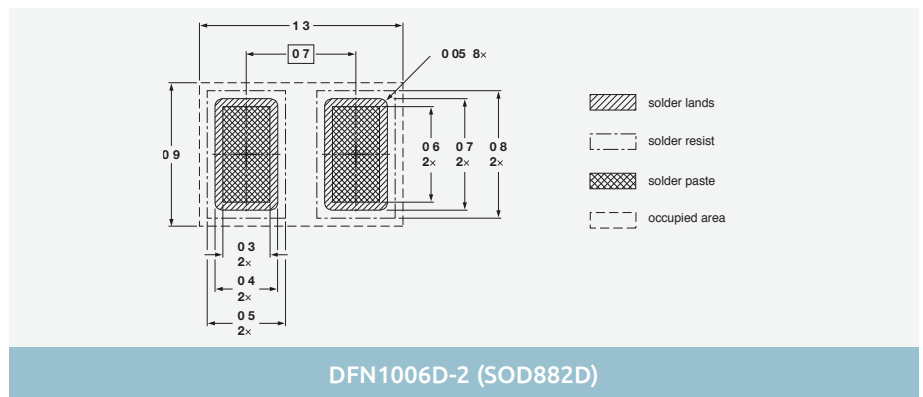
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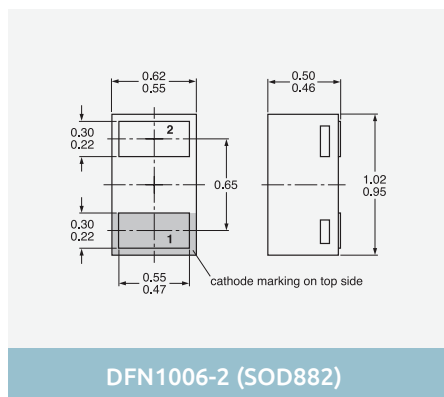
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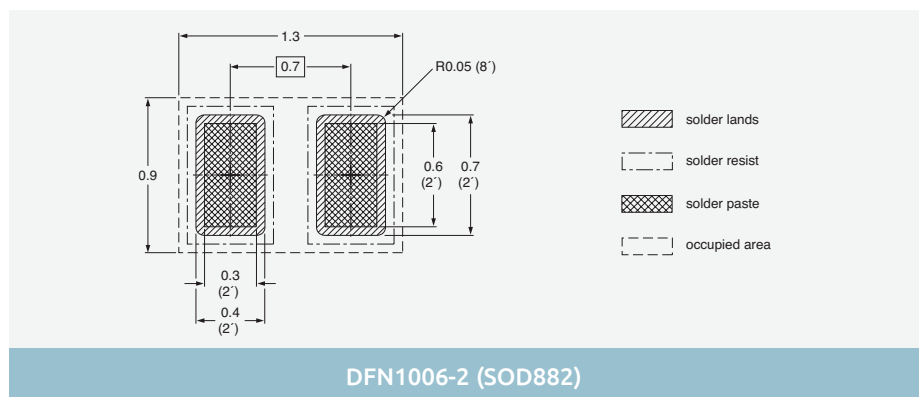
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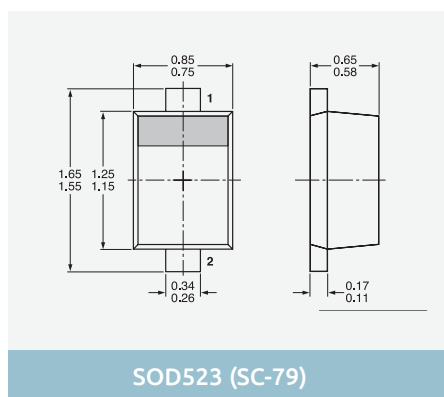
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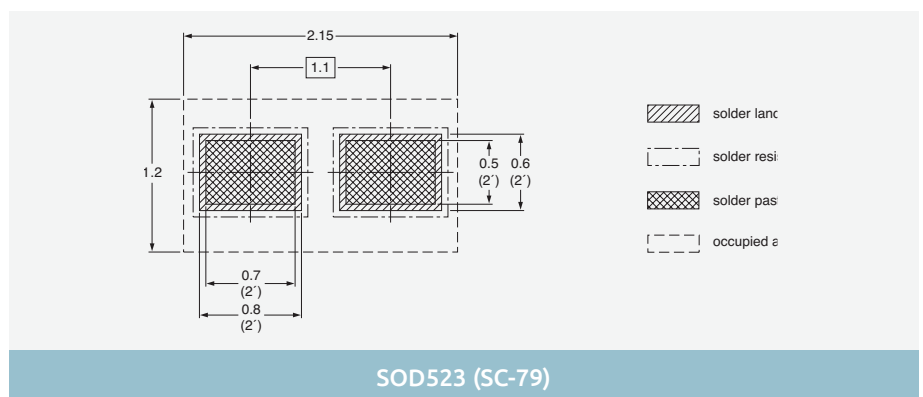
DFN1006-2 (SOD882)



DFN1006-2 (SOD882)



SOD523 (SC-79)

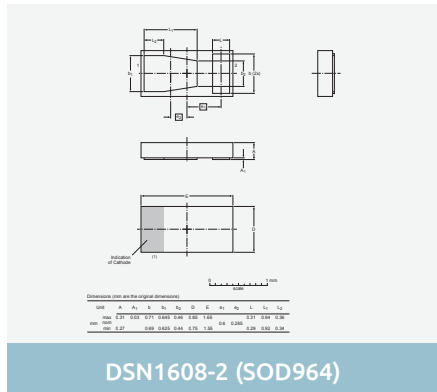


SOD523 (SC-79)

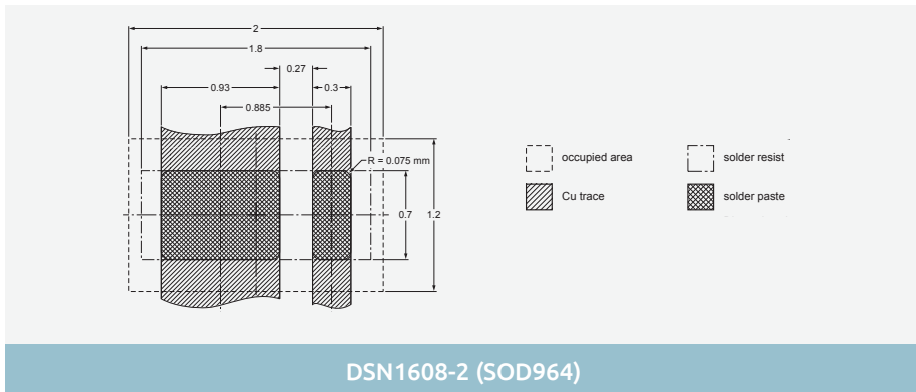
Dimensions in mm

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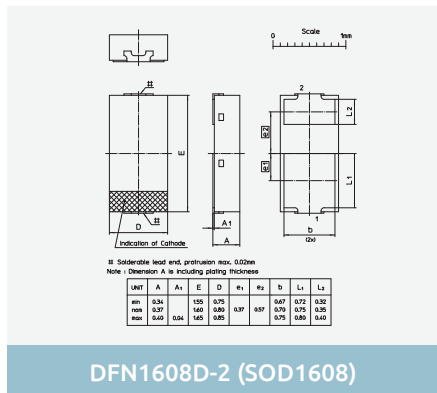
2-pin SMD packages



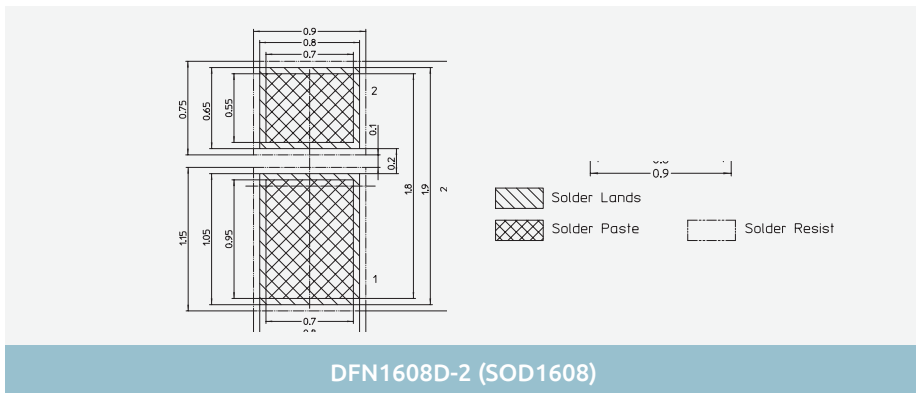
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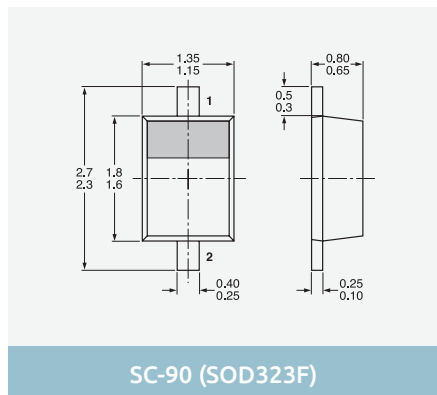
DSN1608-2 (SOD964)



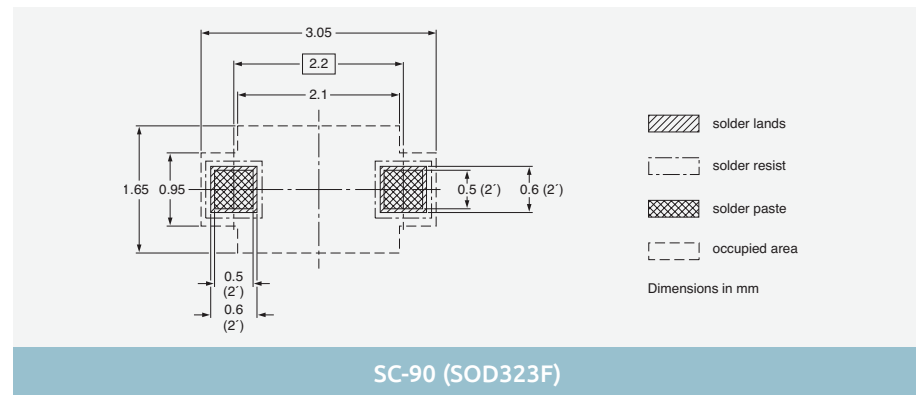
DFN1608D-2 (SOD1608)



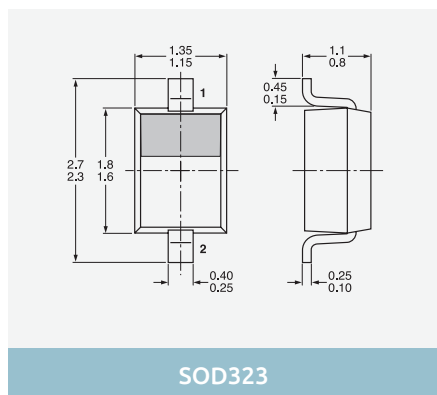
DFN1608D-2 (SOD1608)



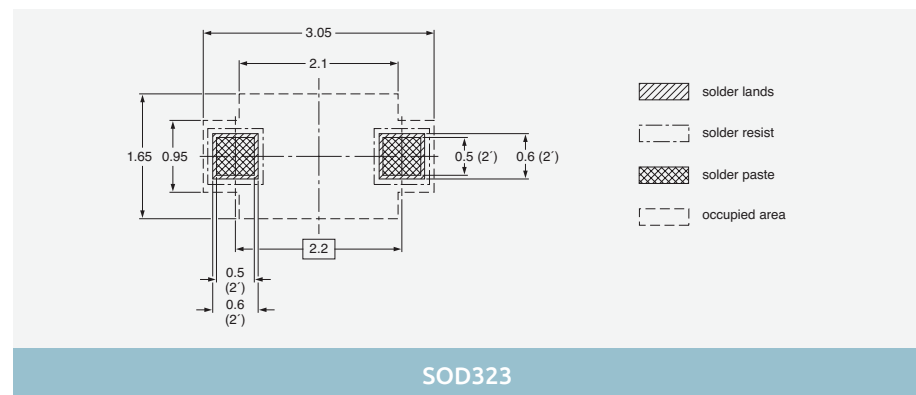
SC-90 (SOD323F)



SC-90 (SOD323F)



SOD323

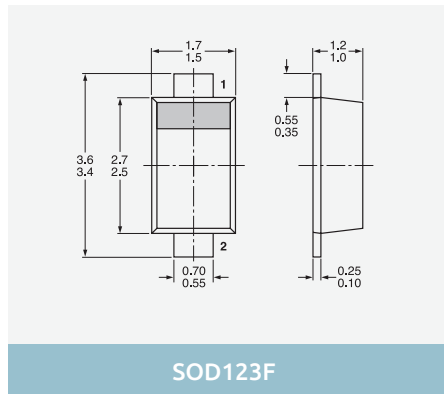


SOD323

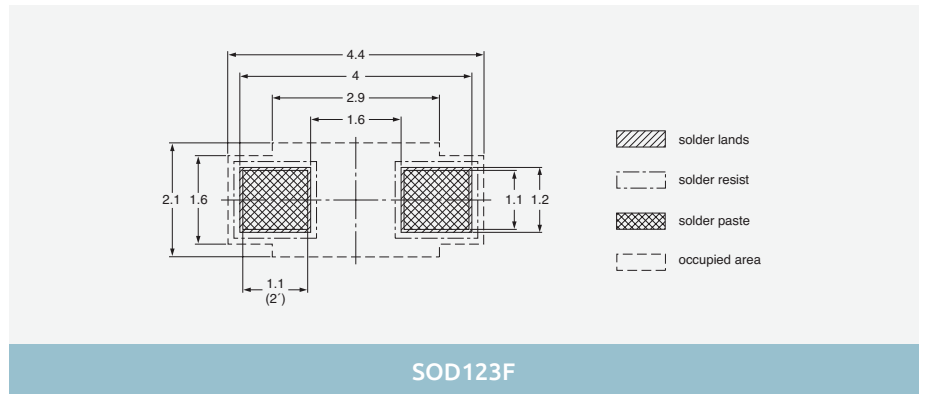
Dimensions in mm

Images are for reference only, for detailed drawings please visit [nexperia.com/packages](http://nexperia.com/packages)

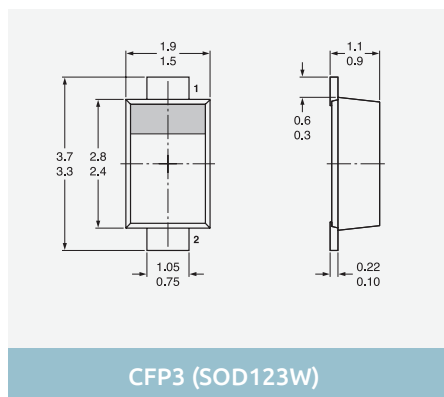
2-pin SMD packages



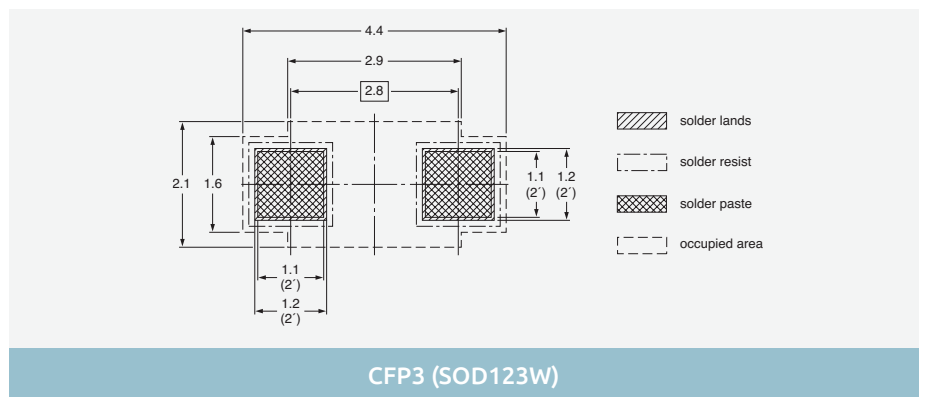
SOD123F



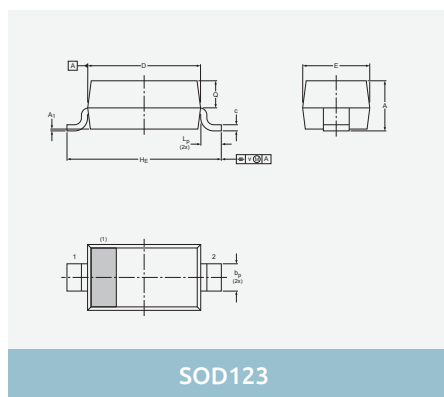
SOD123F



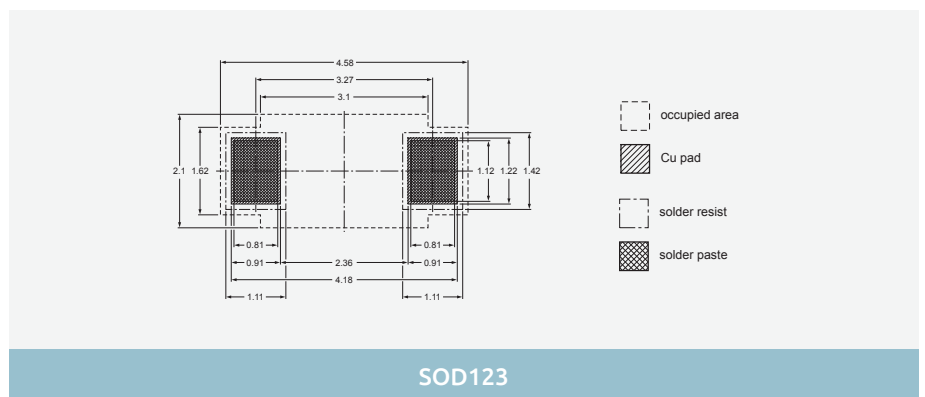
CFP3 (SOD123W)



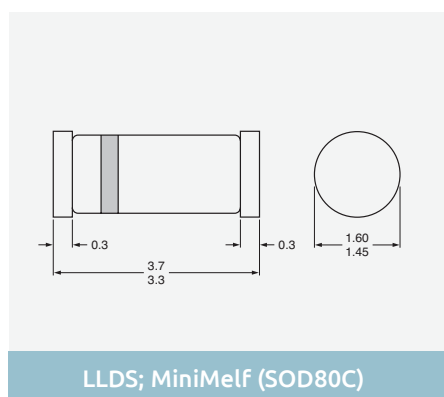
CFP3 (SOD123W)



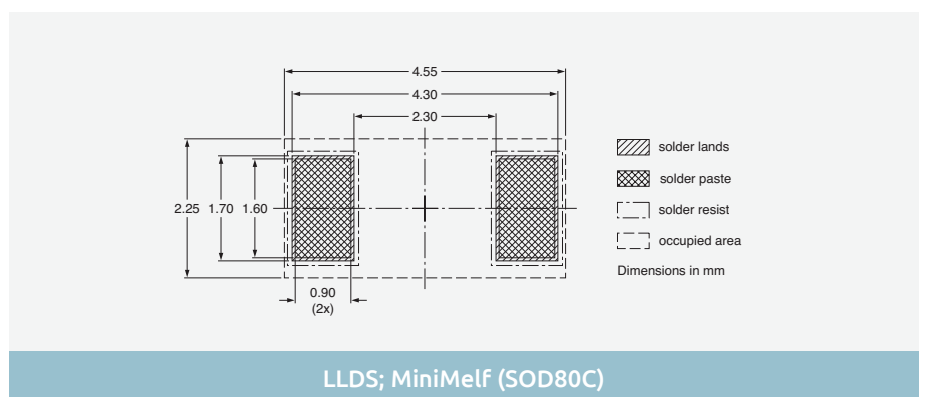
SOD123



SOD123

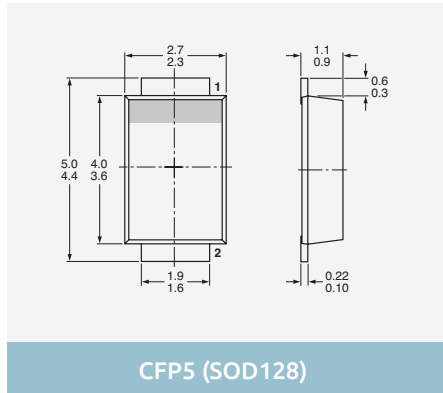


LLDS; MiniMelf (SOD80C)

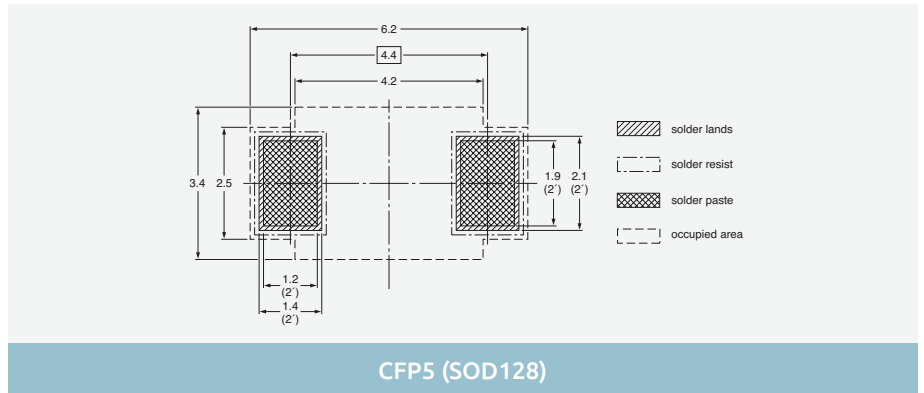


LLDS; MiniMelf (SOD80C)

## 2-pin SMD packages

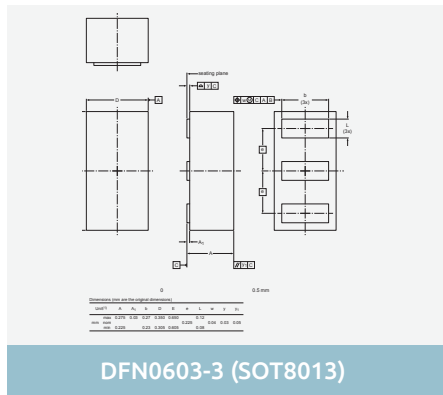


CFP5 (SOD128)

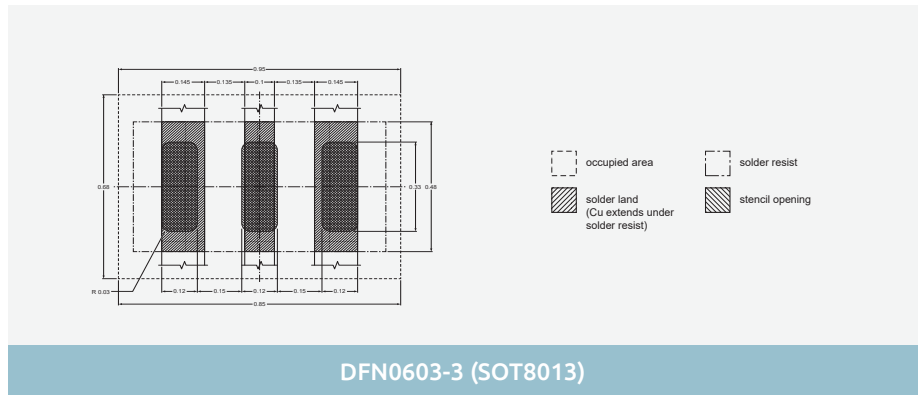


CFP5 (SOD128)

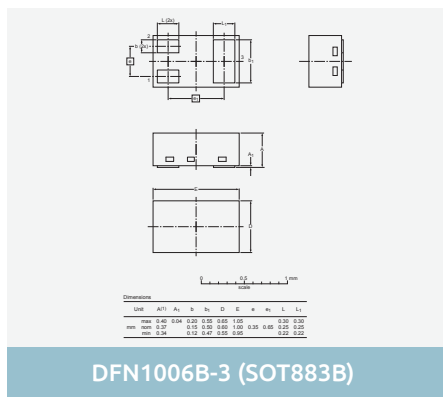
## 3-pin SMD packages



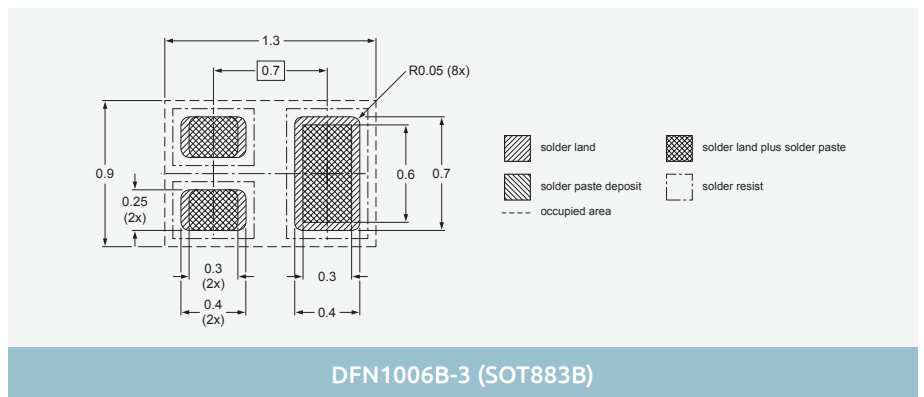
DFN0603-3 (SOT8013)



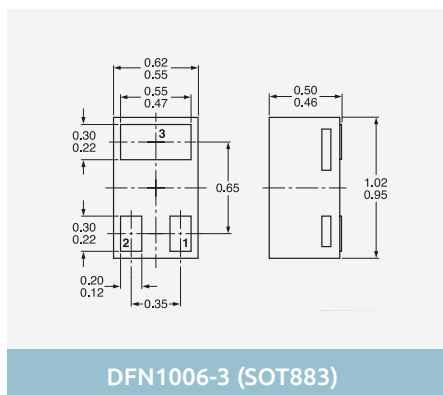
DFN0603-3 (SOT8013)



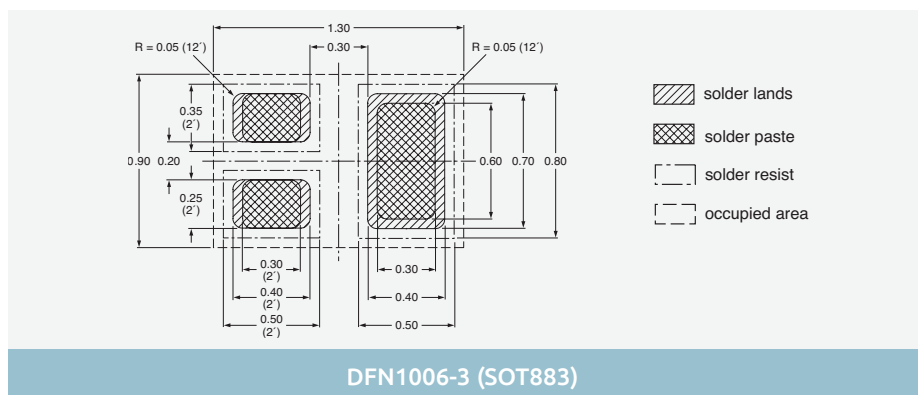
DFN1006B-3 (SOT883B)



DFN1006B-3 (SOT883B)



DFN1006-3 (SOT883)

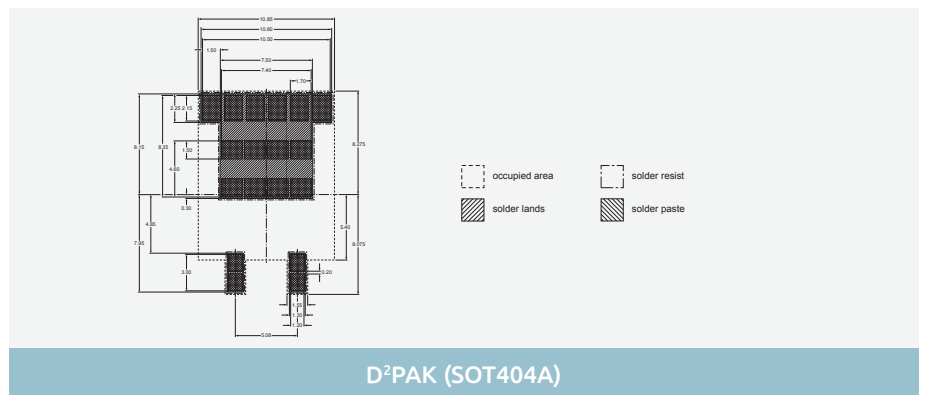
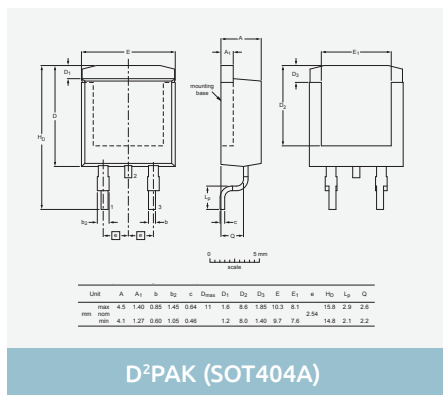
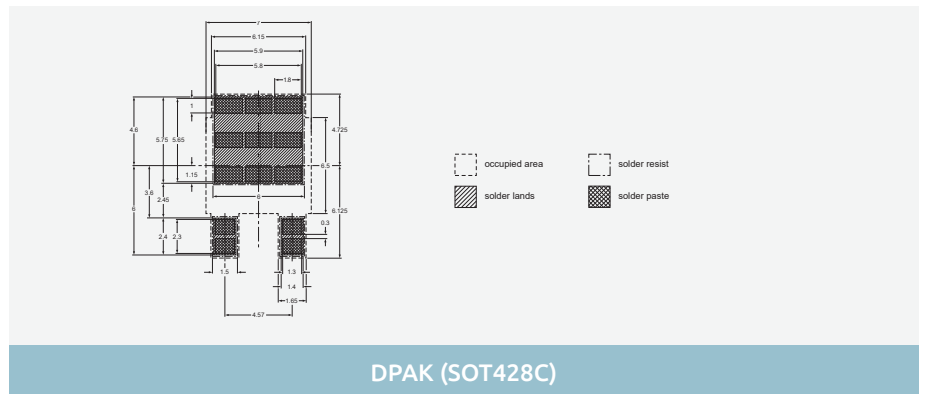
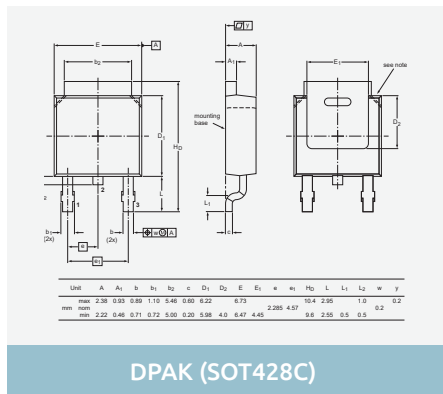
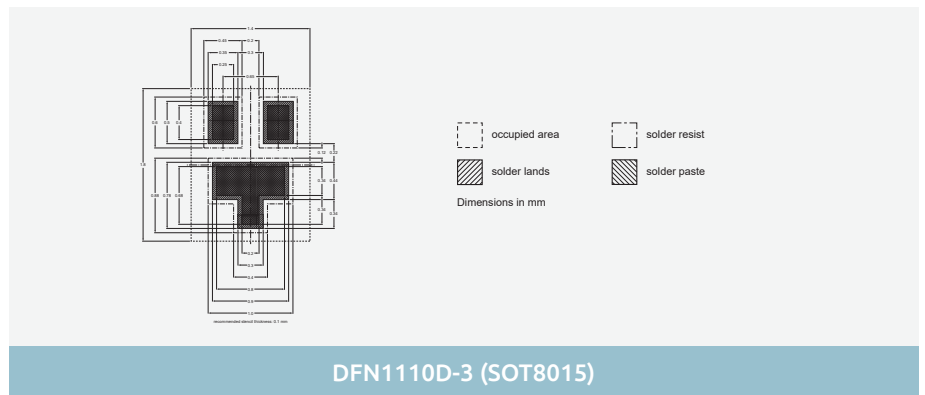
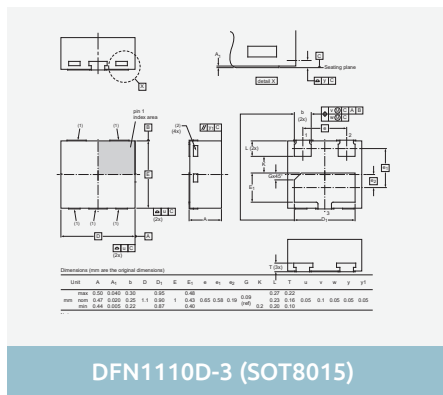
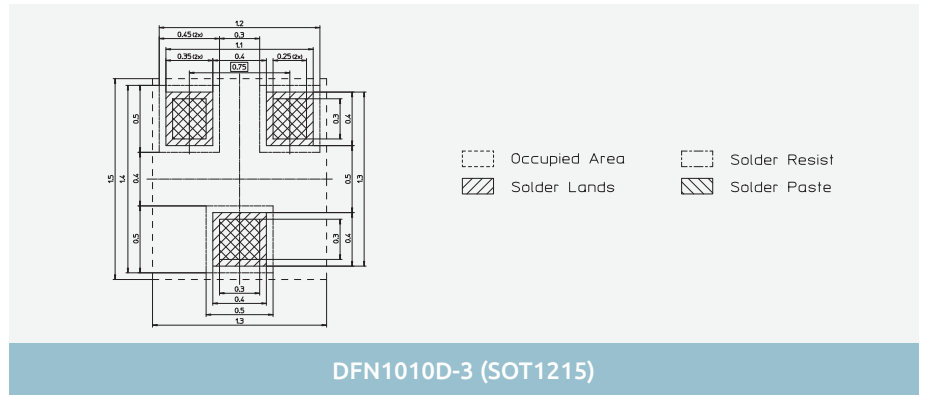
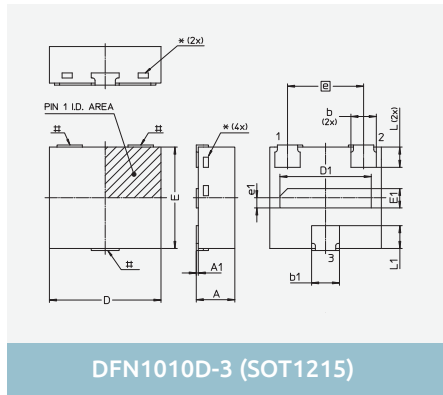


DFN1006-3 (SOT883)

Dimensions in mm

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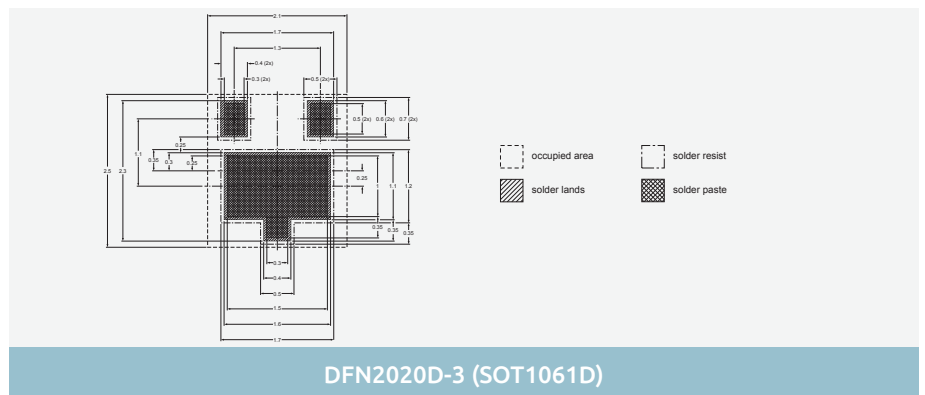
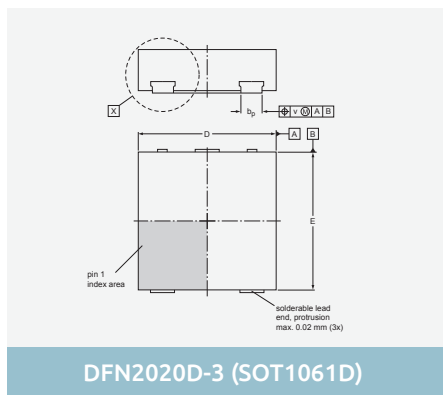
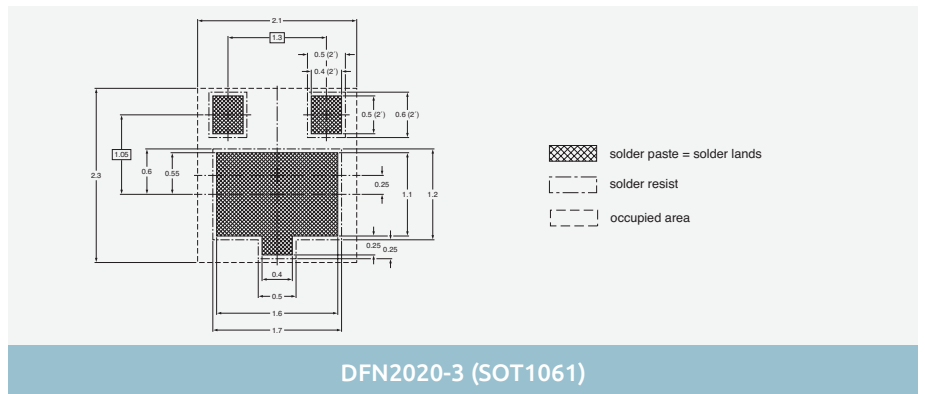
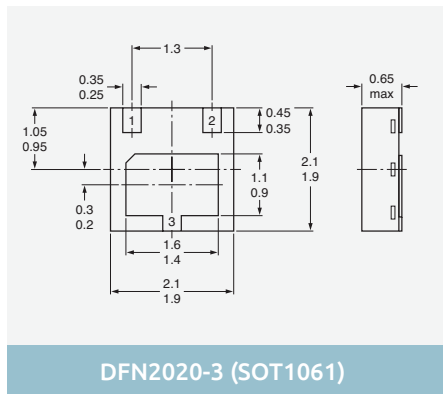
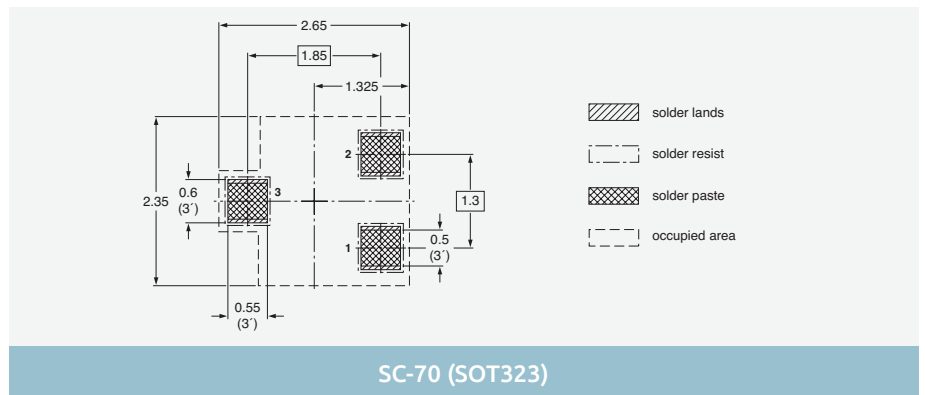
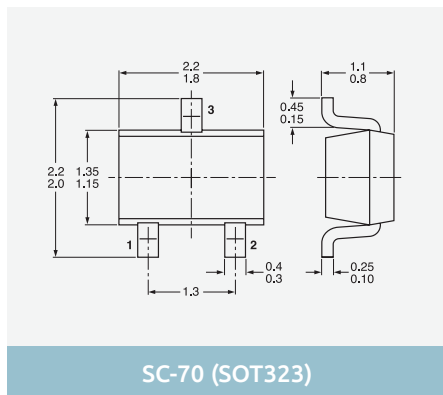
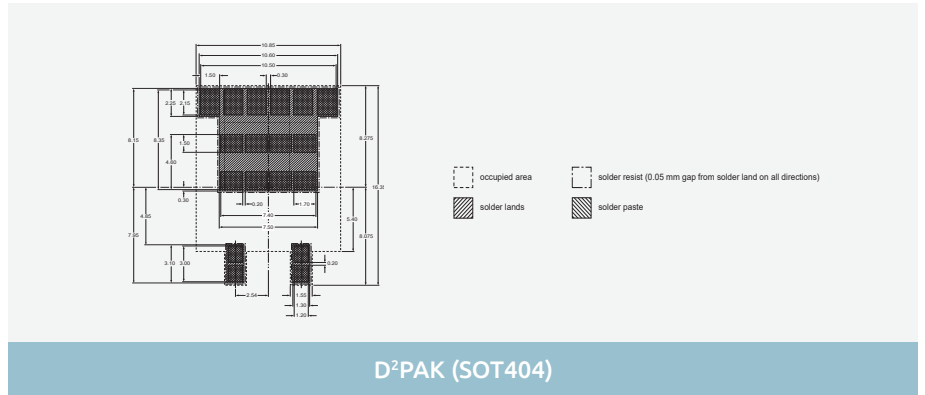
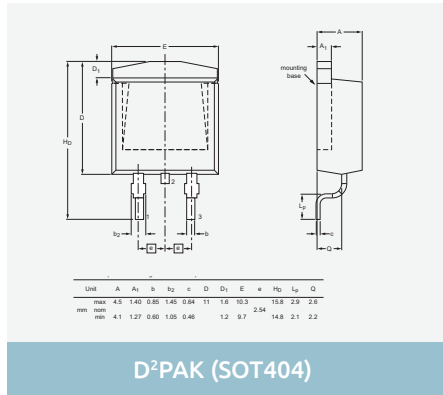
3-pin SMD packages



Dimensions in mm

Images are for reference only, for detailed drawings please visit [nexperia.com/packages](http://nexperia.com/packages)

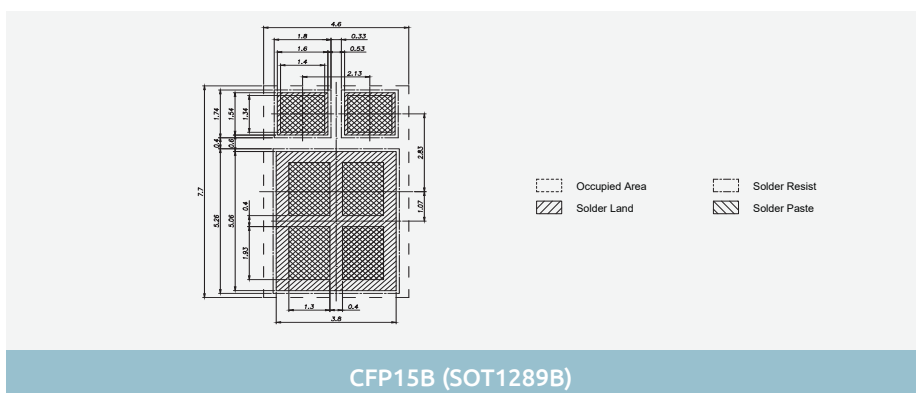
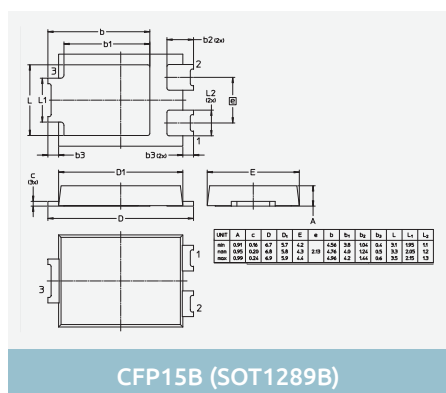
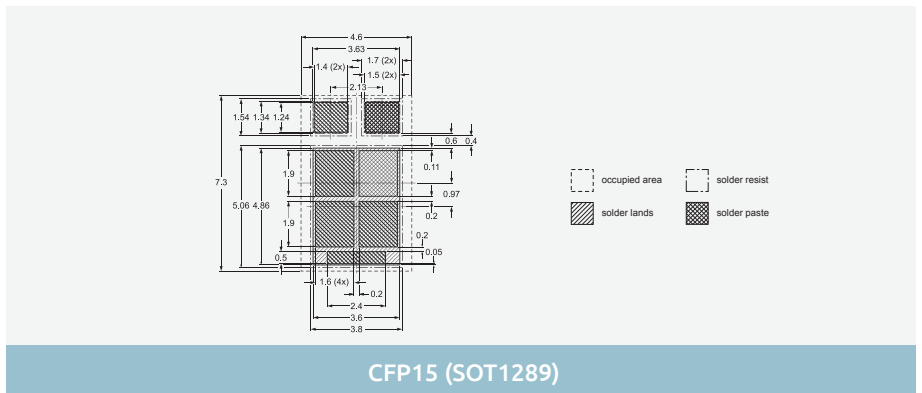
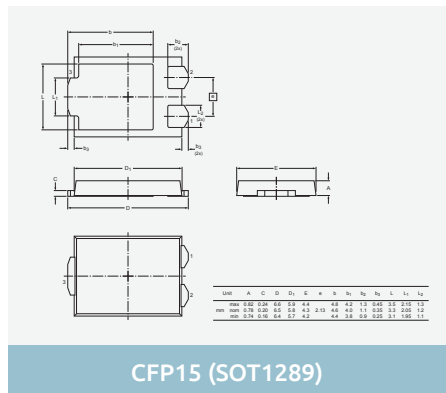
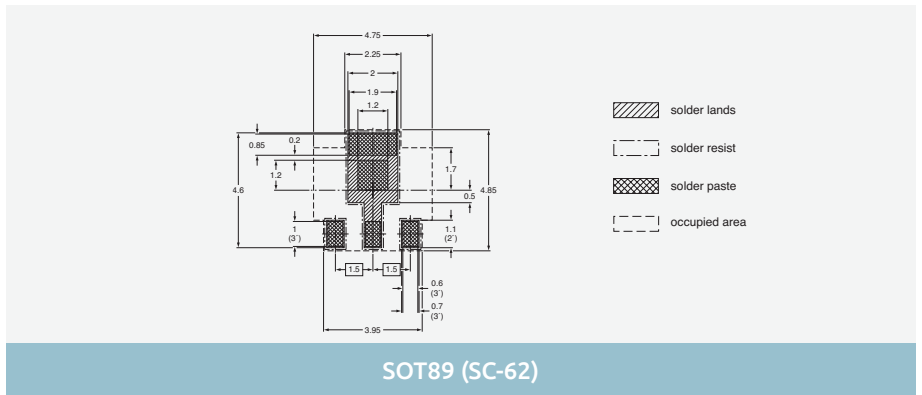
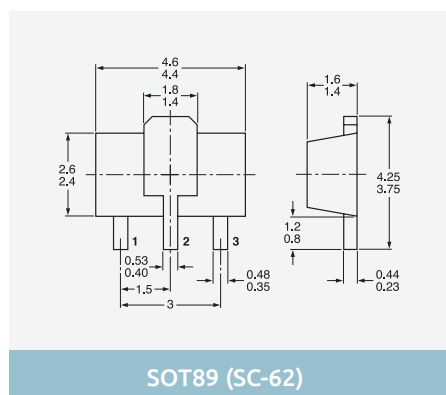
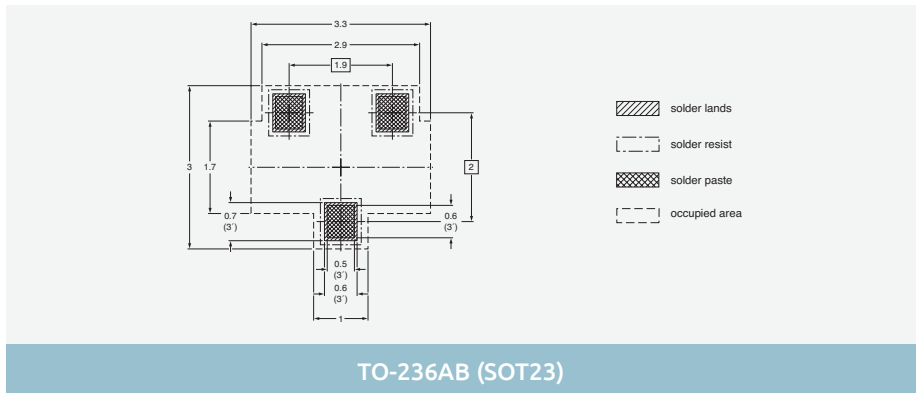
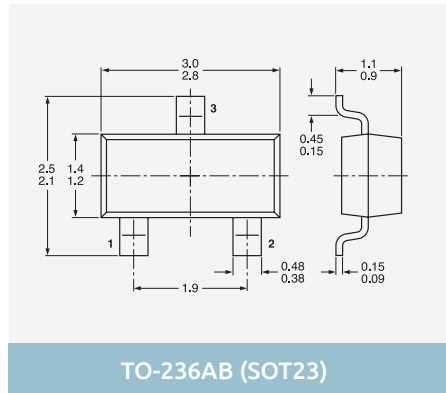
### 3-pin SMD packages



Dimensions in mm

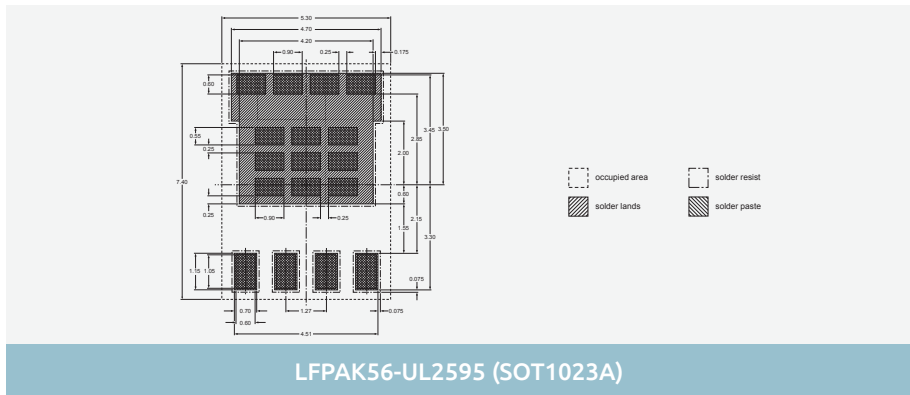
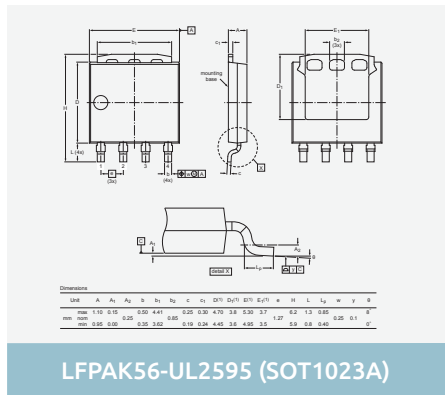
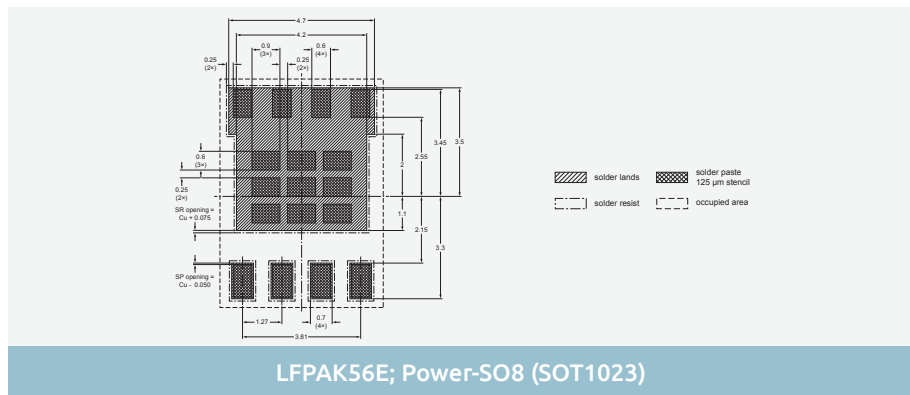
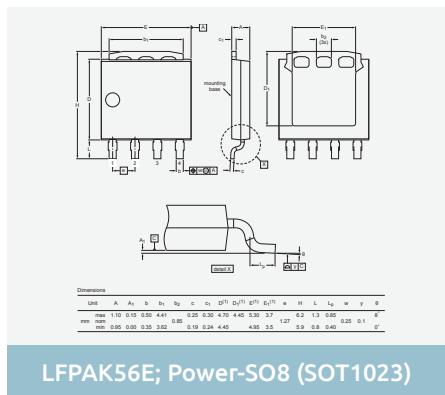
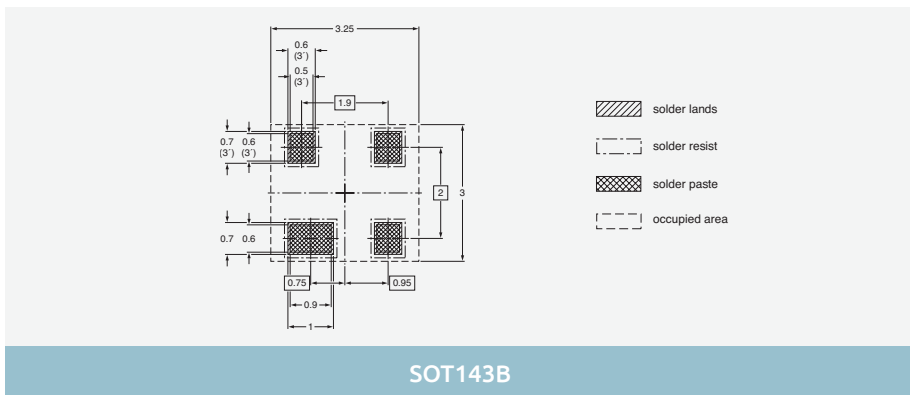
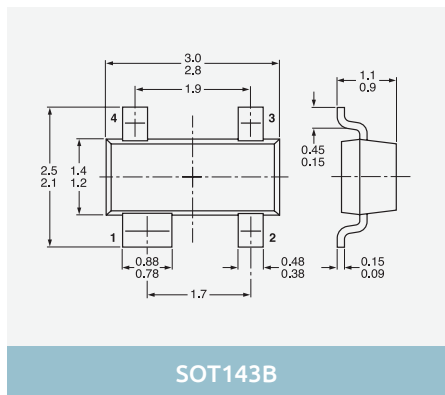
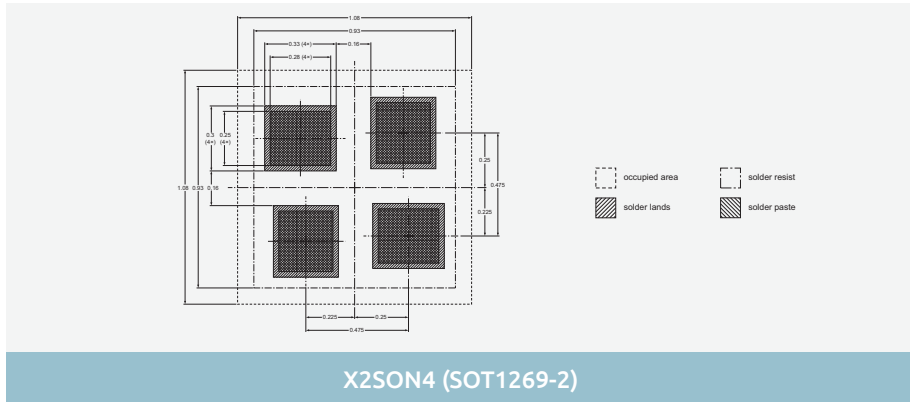
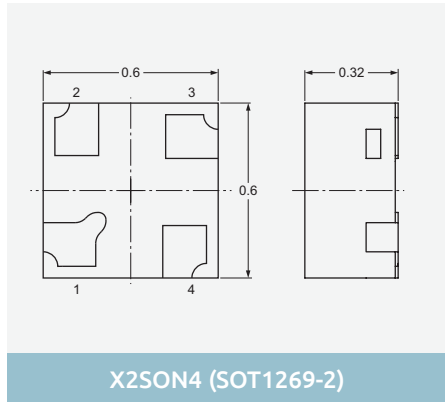
Images are for reference only, for detailed drawings please visit [nexperia.com/packages](http://nexperia.com/packages)

## 3-pin SMD packages



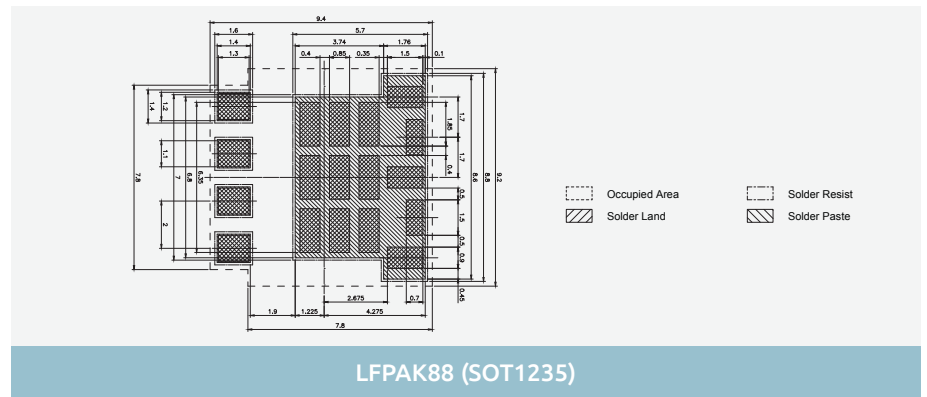
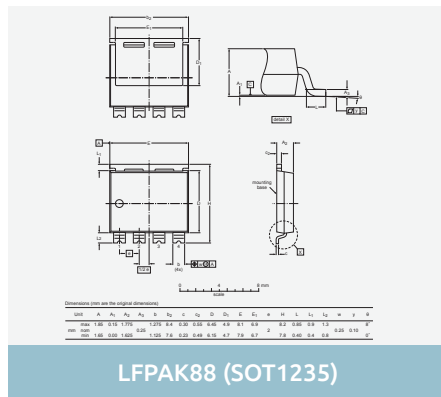
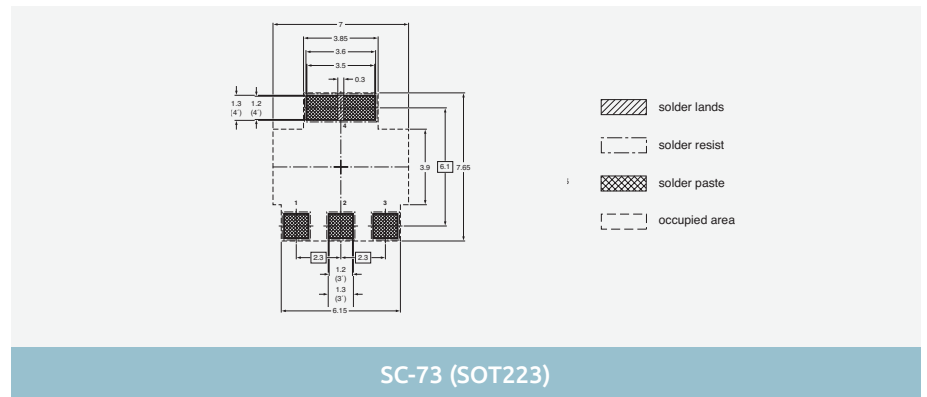
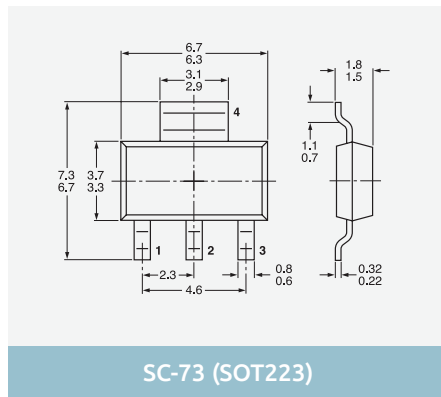
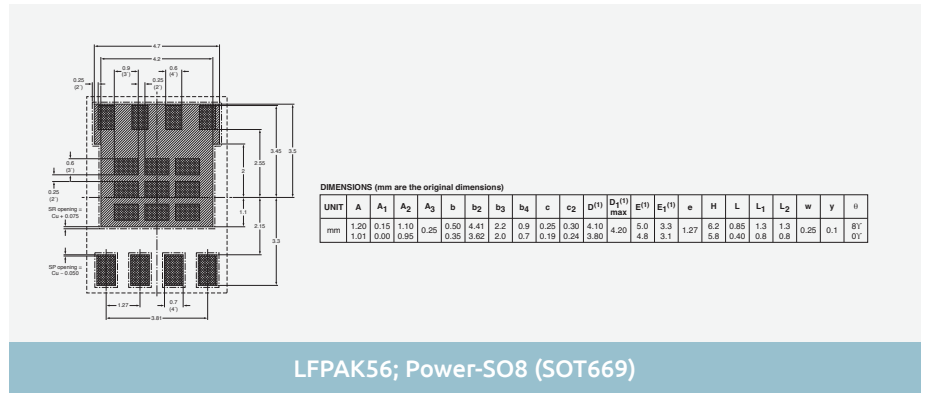
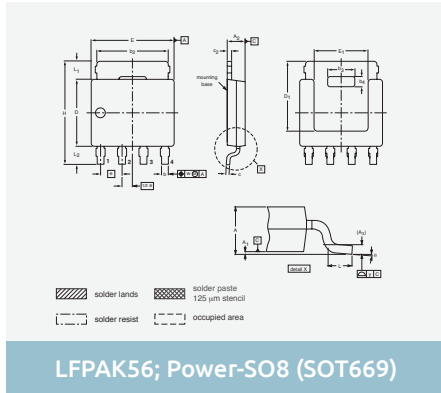


### 4-pin SMD packages

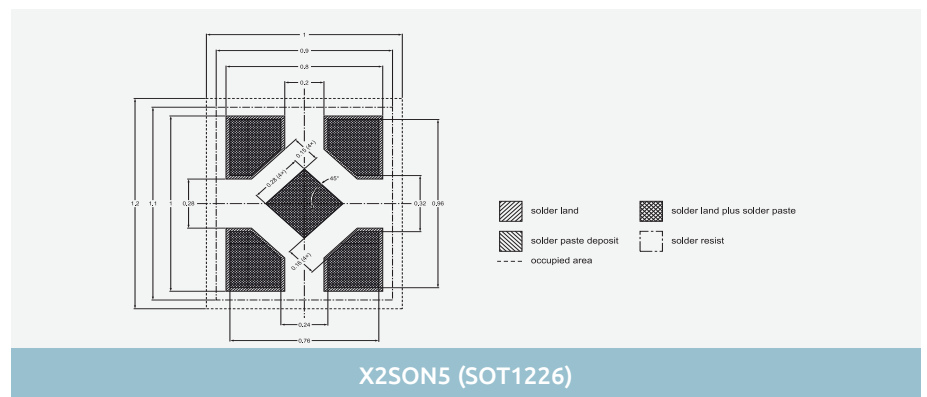
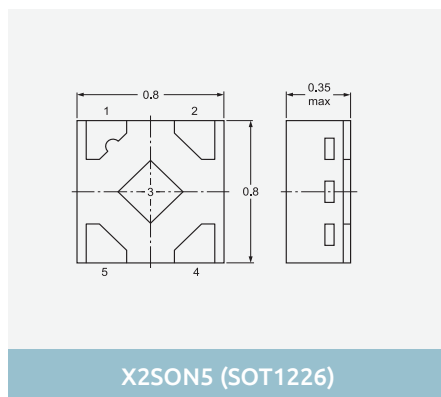


Dimensions in mm  
Images are for reference only, for detailed drawings please visit [nexperia.com/packages](http://nexperia.com/packages)

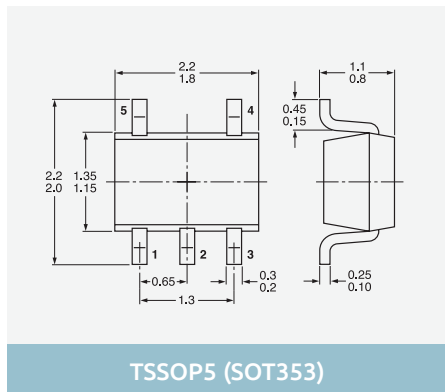
## 4-pin SMD packages



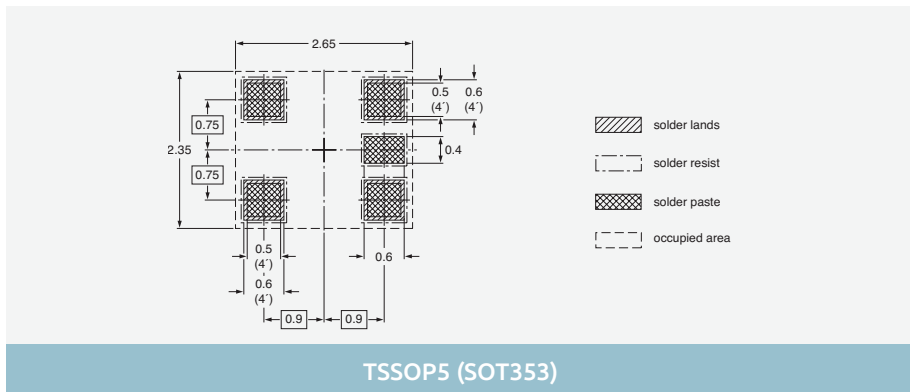
## 5-pin SMD packages



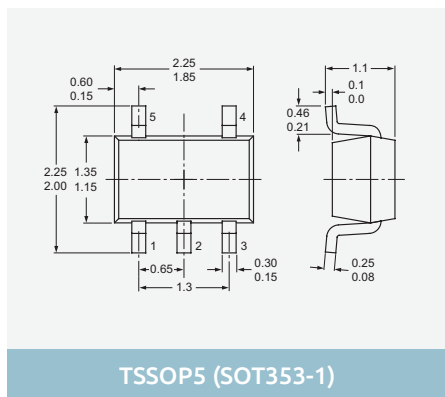
### 5-pin SMD packages



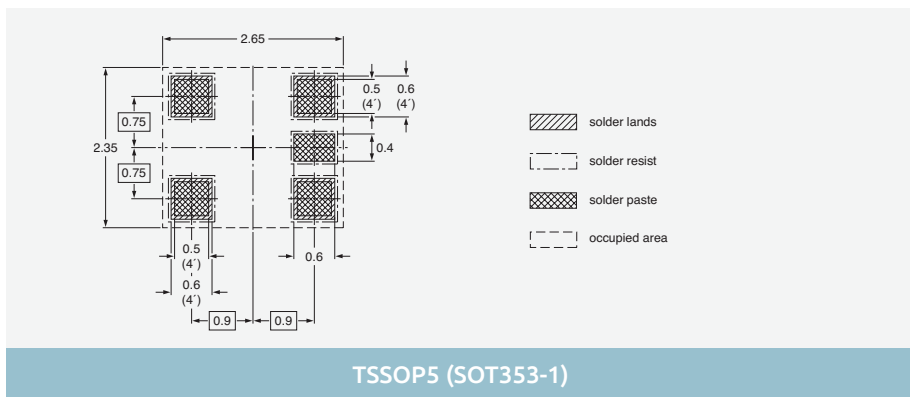
TSSOP5 (SOT353)



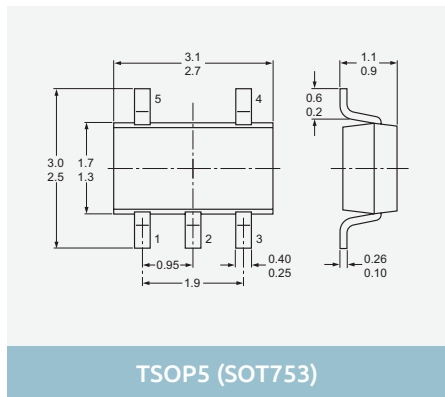
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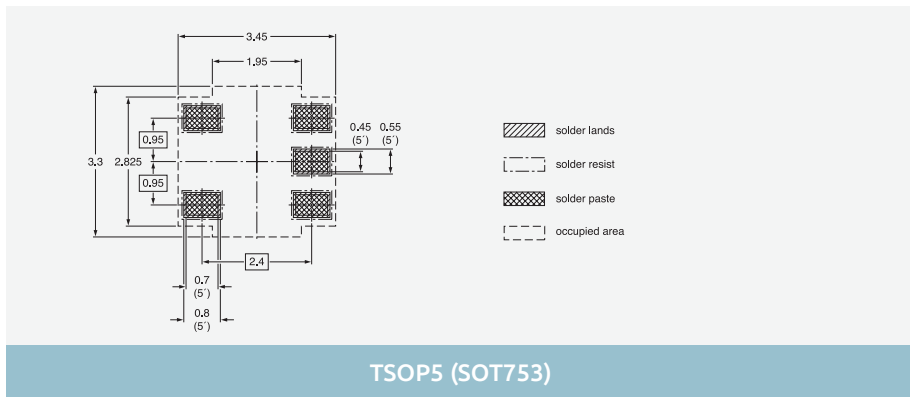
TSSOP5 (SOT353-1)



TSSOP5 (SOT353-1)

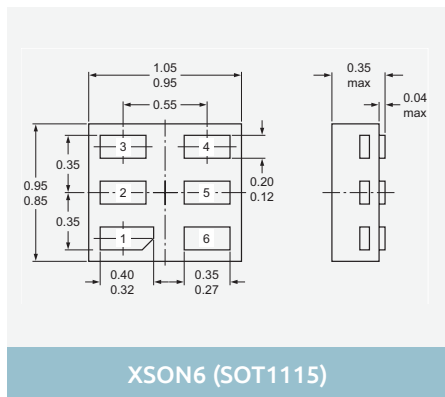


TSOP5 (SOT753)

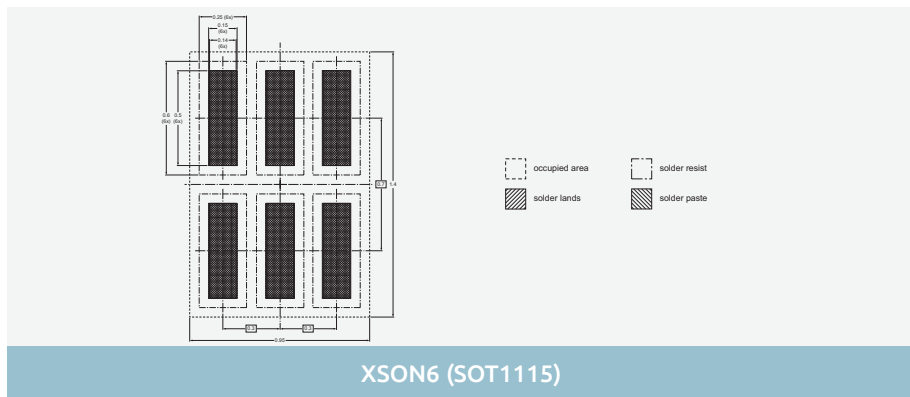


TSOP5 (SOT753)

### 6-pin SMD packages



XSON6 (SOT1115)



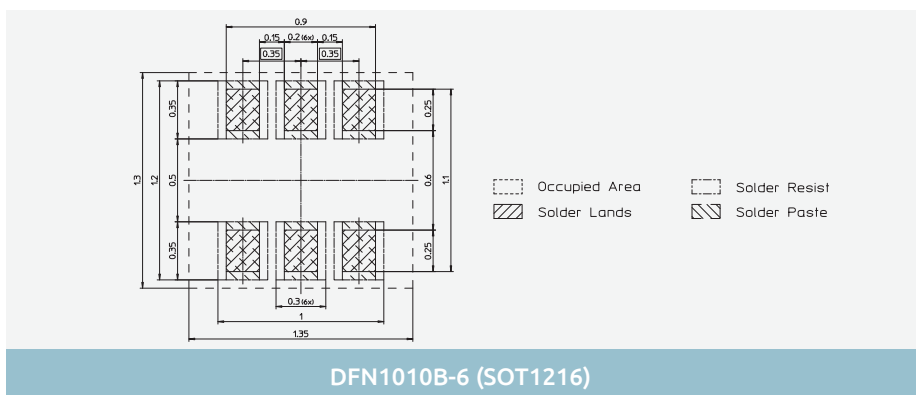
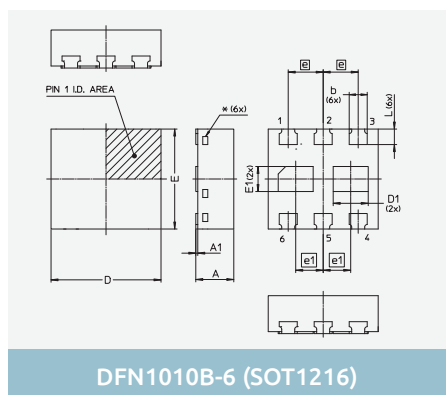
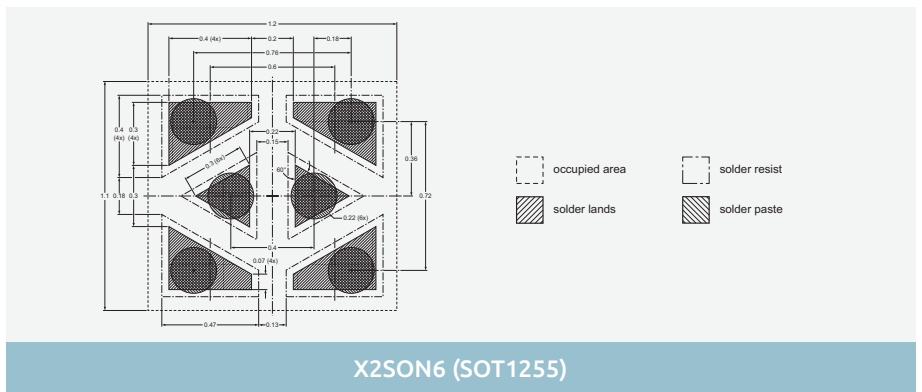
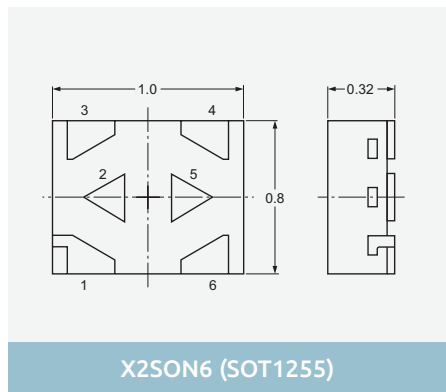
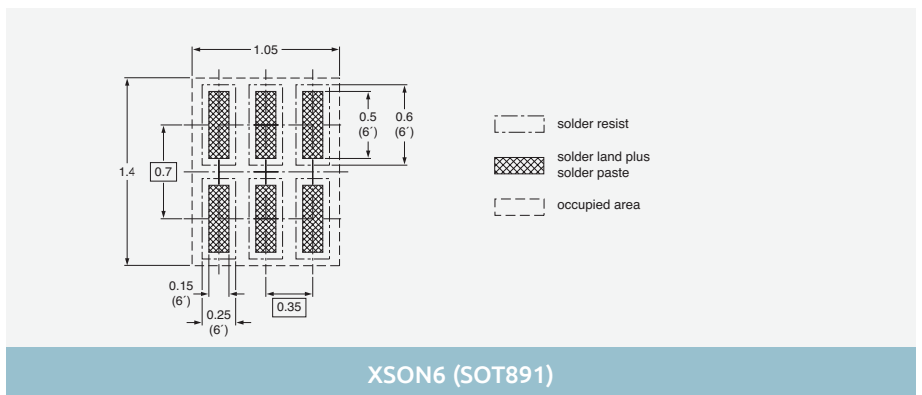
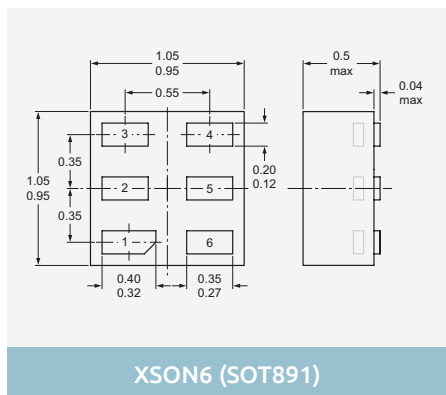
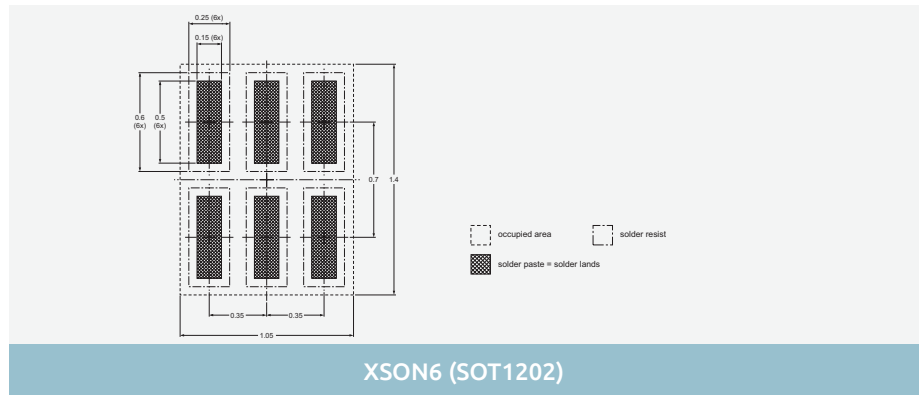
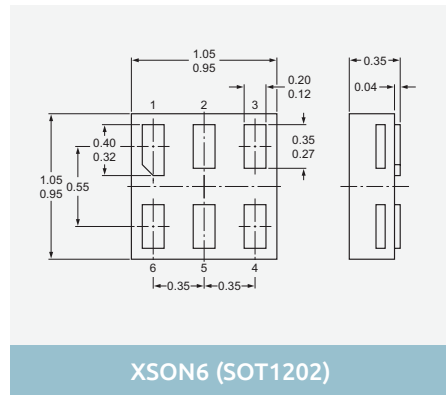
XSON6 (SOT1115)

Dimensions in mm

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# Minimized outline drawings and reflow soldering footprint

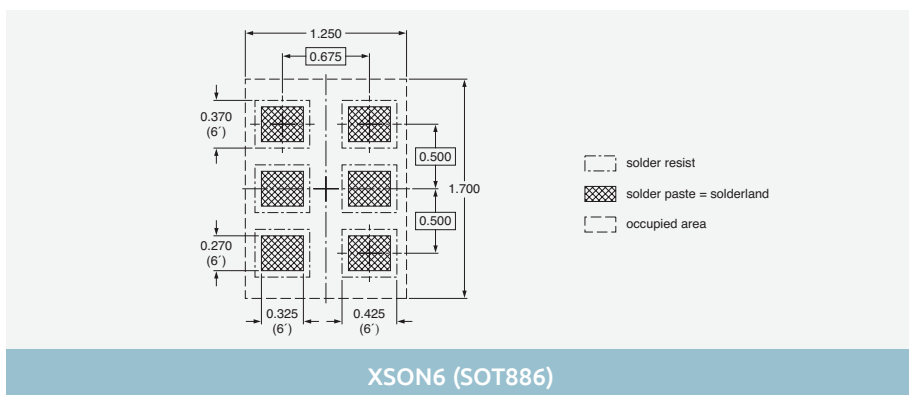
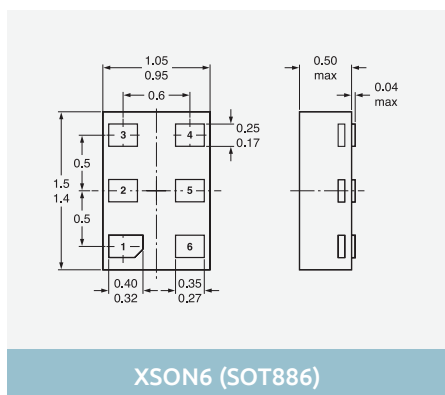
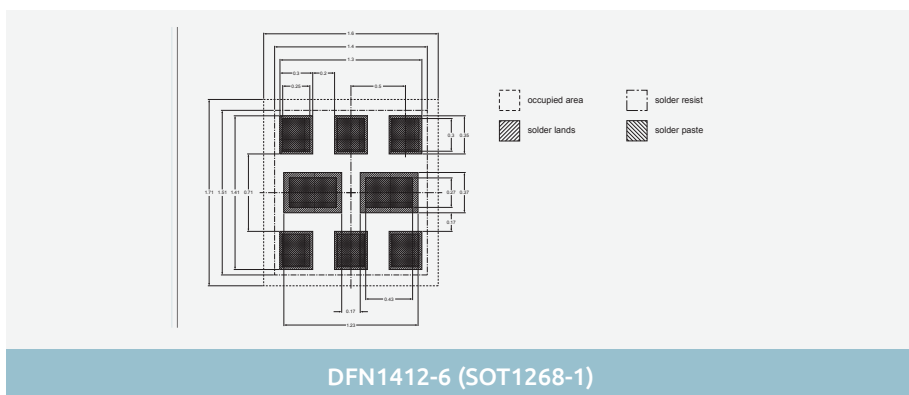
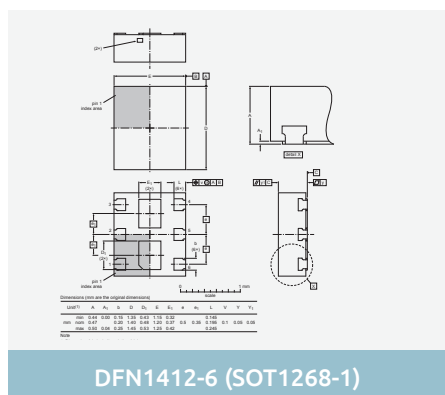
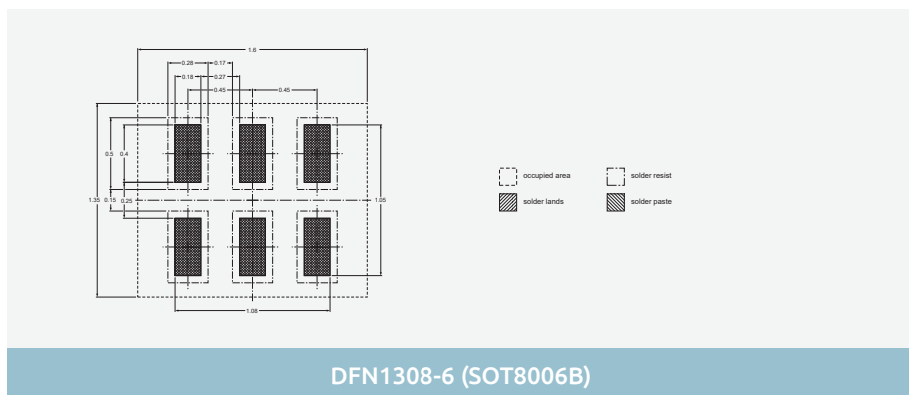
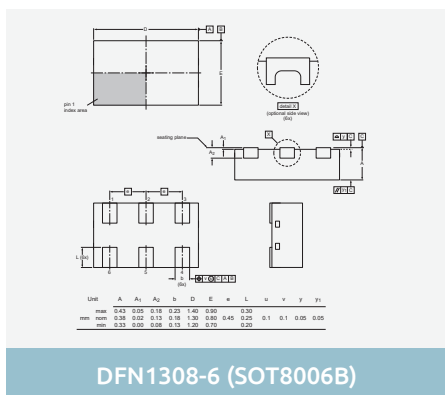
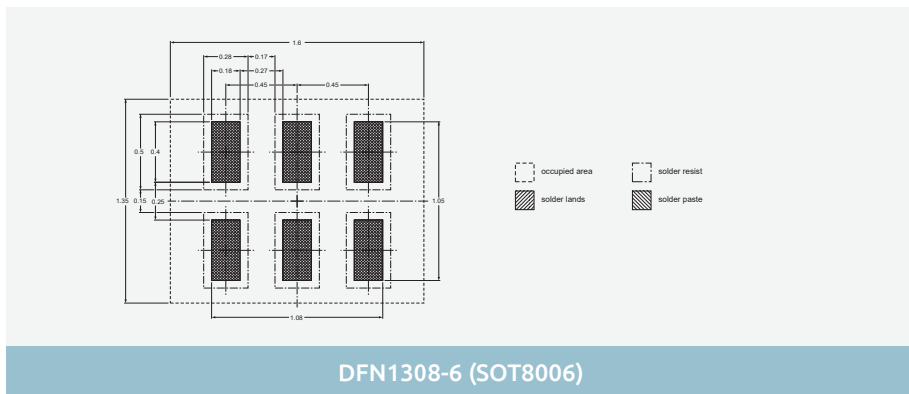
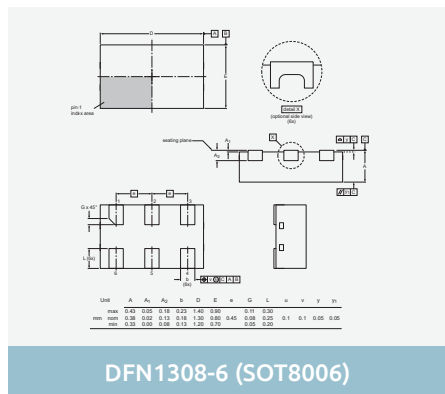
## 6-pin SMD packages



Dimensions in mm

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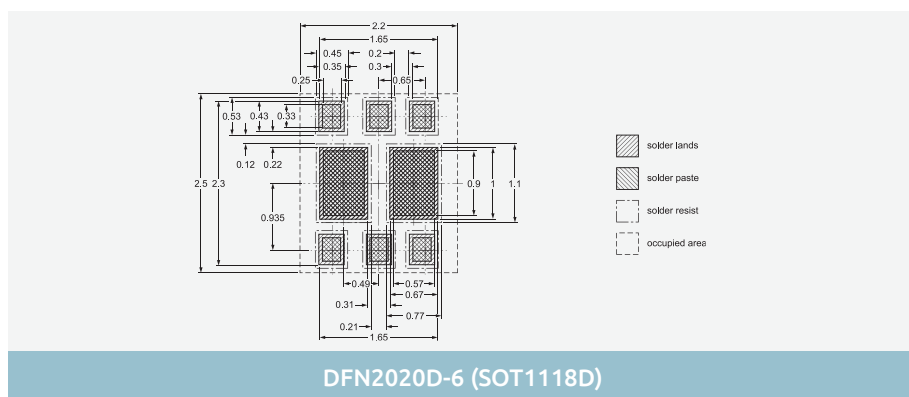
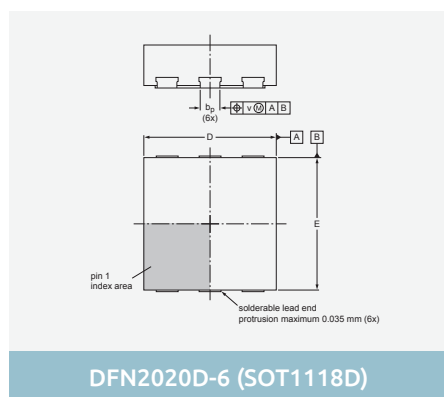
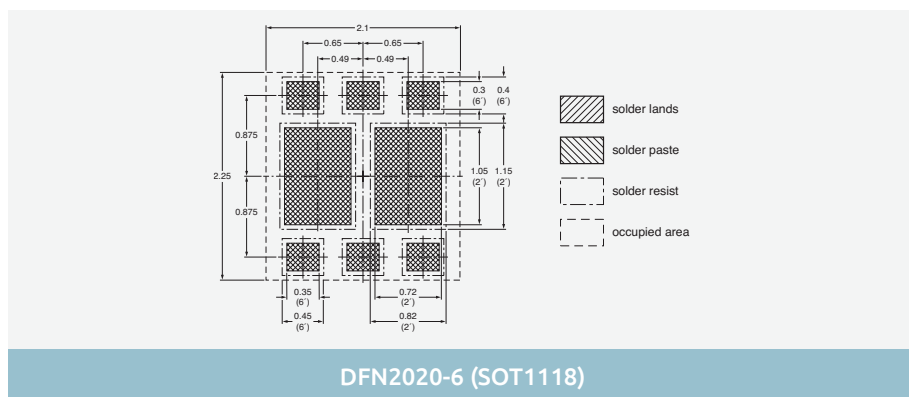
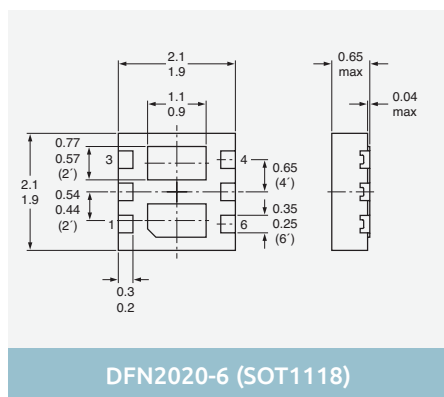
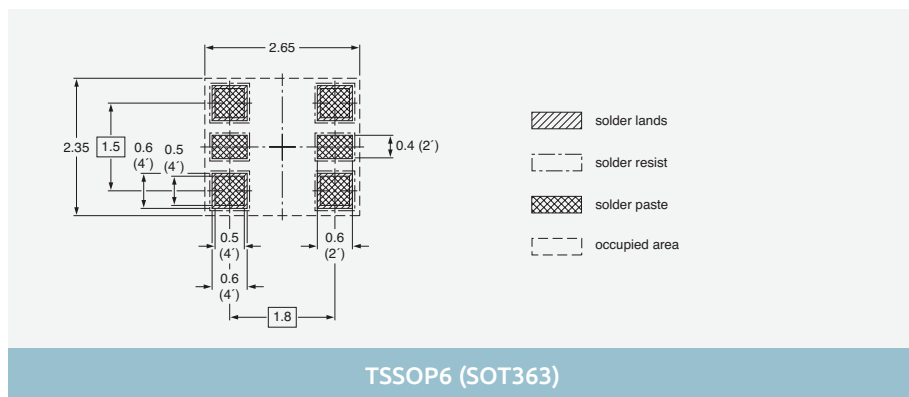
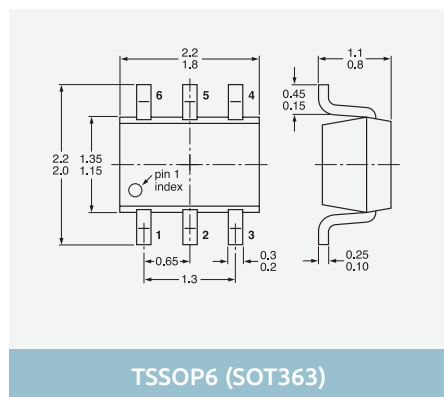
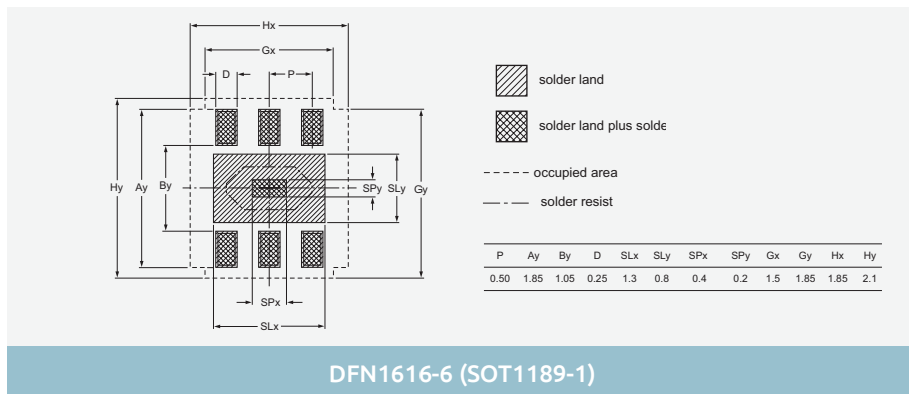
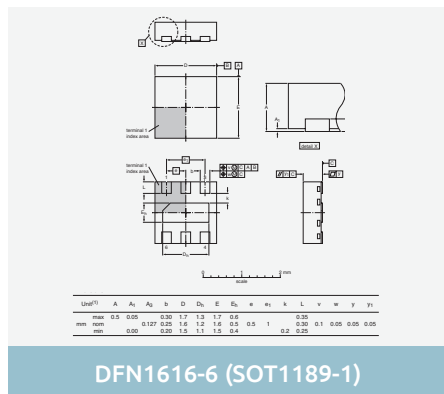
## 6-pin SMD packages



Dimensions in mm

Images are for reference only, for detailed drawings please visit [nexperia.com/packages](http://nexperia.com/packages)

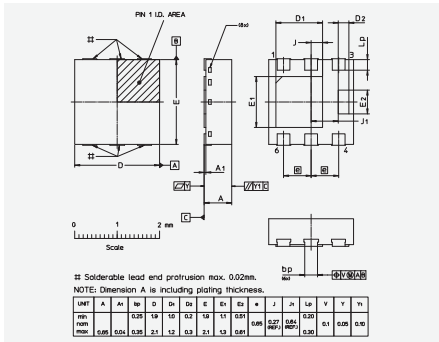
## 6-pin SMD packages



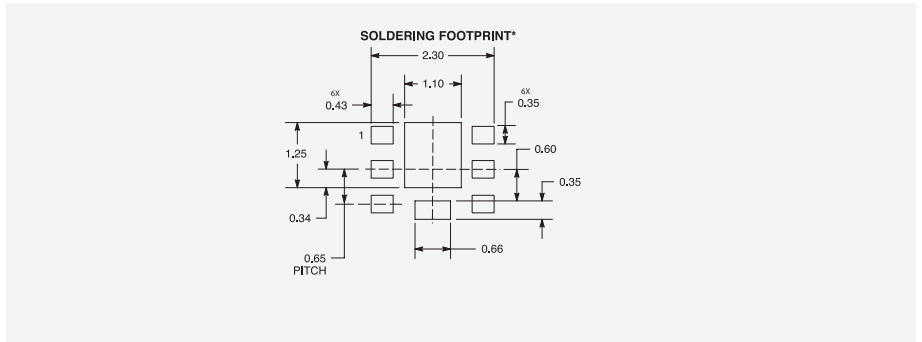
Dimensions in mm

Images are for reference only, for detailed drawings please visit [nexperia.com/packages](http://nexperia.com/packages)

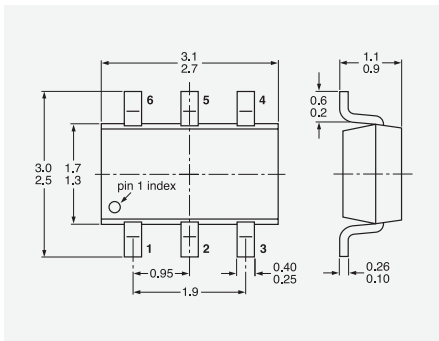
### 6-pin SMD packages



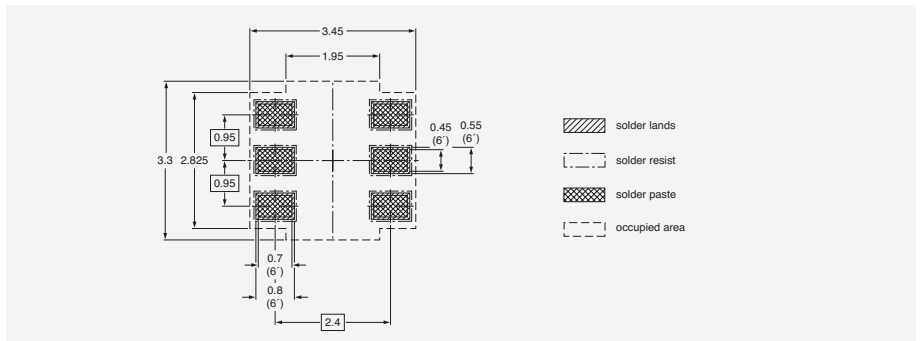
DFN2020MD-6 (SOT1220)



DFN2020MD-6 (SOT1220)

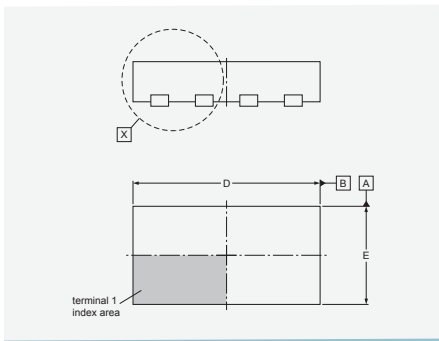


TSOP6 (SOT457)

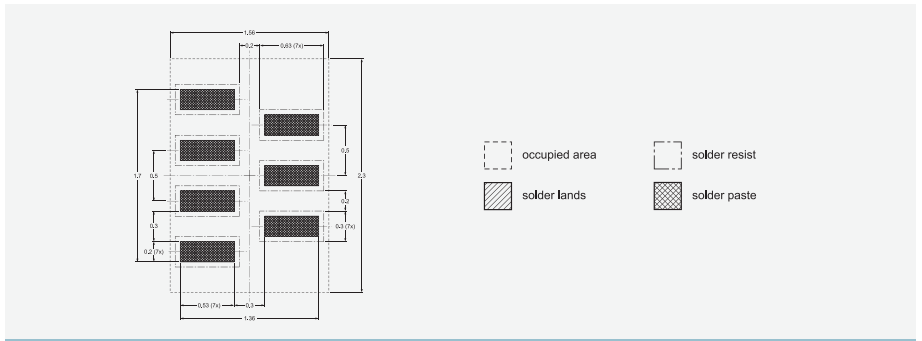


TSOP6 (SOT457)

### 7-pin SMD packages

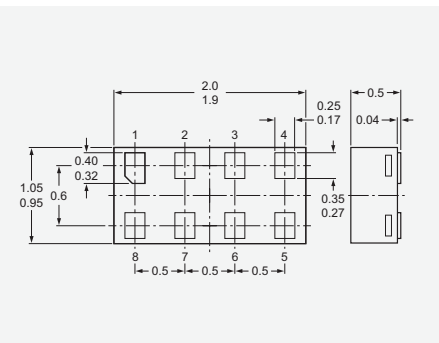


XSON7 (SOT1358-1)

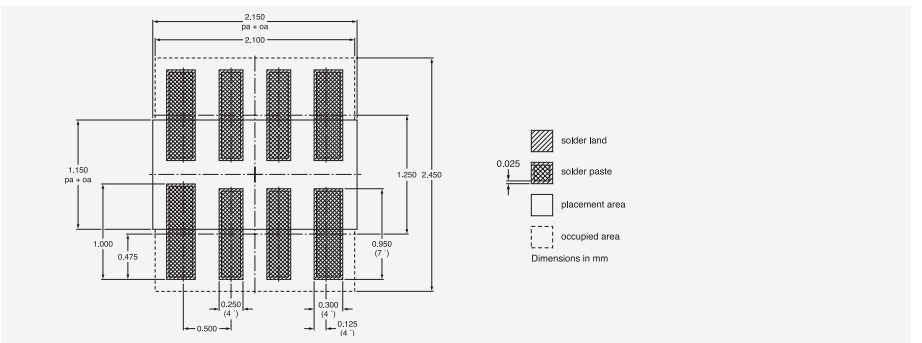


XSON7 (SOT1358-1)

### 8-pin SMD packages



XSON8 (SOT833-1)



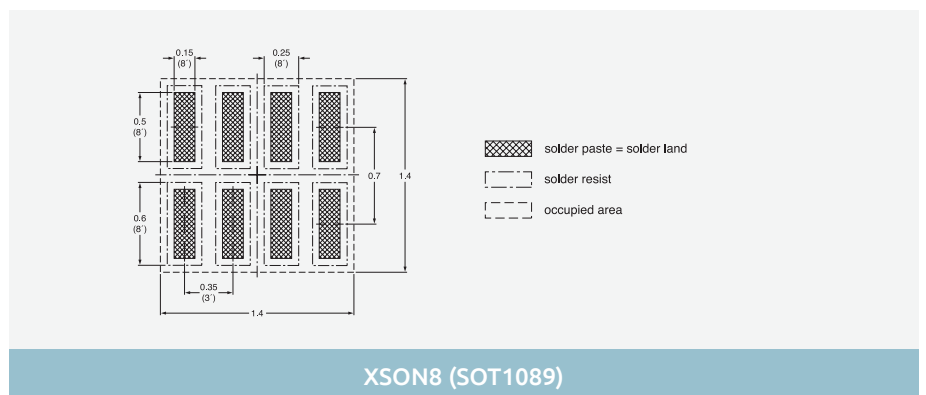
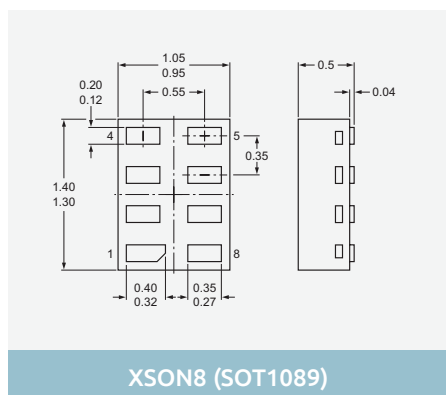
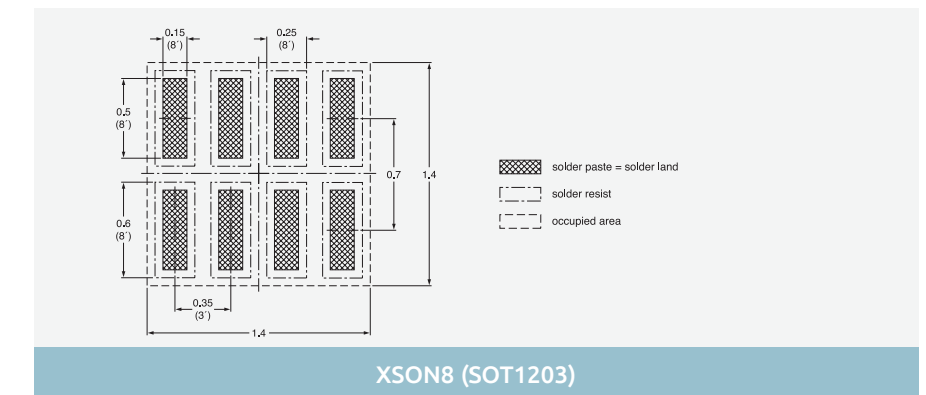
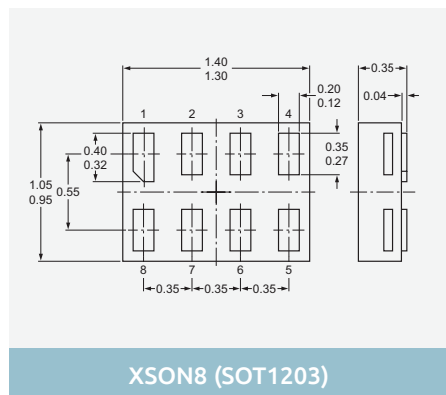
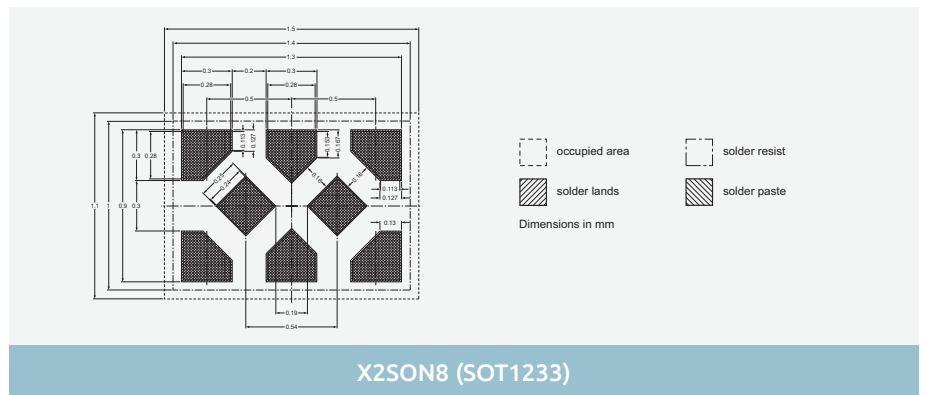
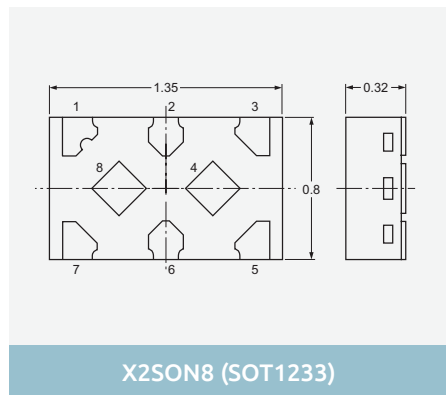
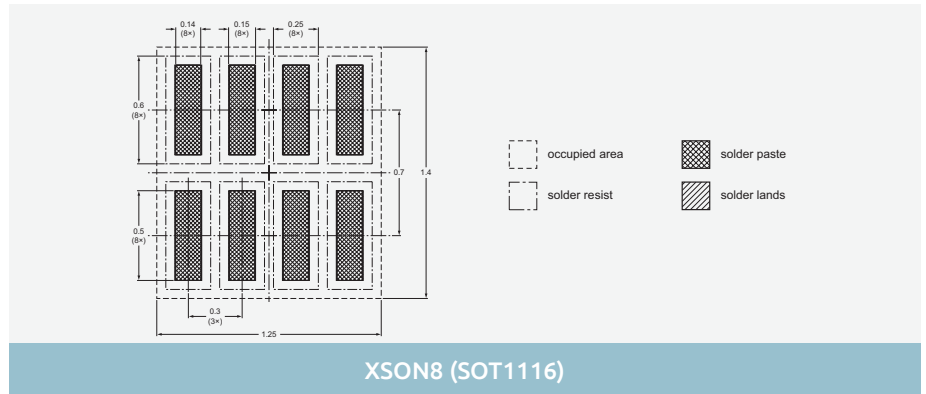
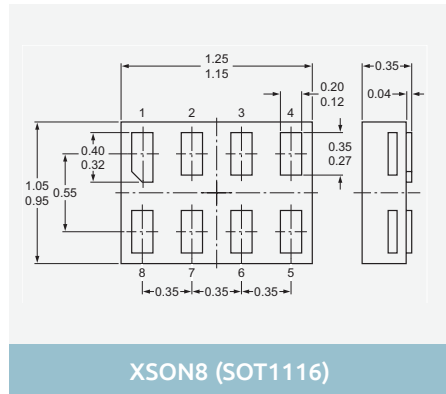
XSON8 (SOT833-1)

Dimensions in mm

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# Minimized outline drawings and reflow soldering footprint

## 8-pin SMD packages

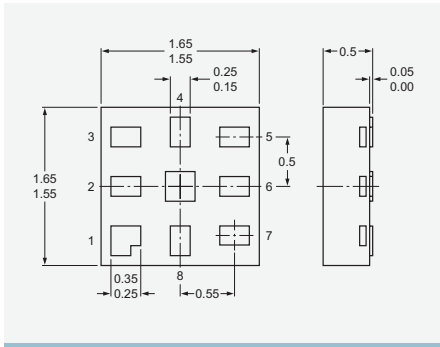


Dimensions in mm

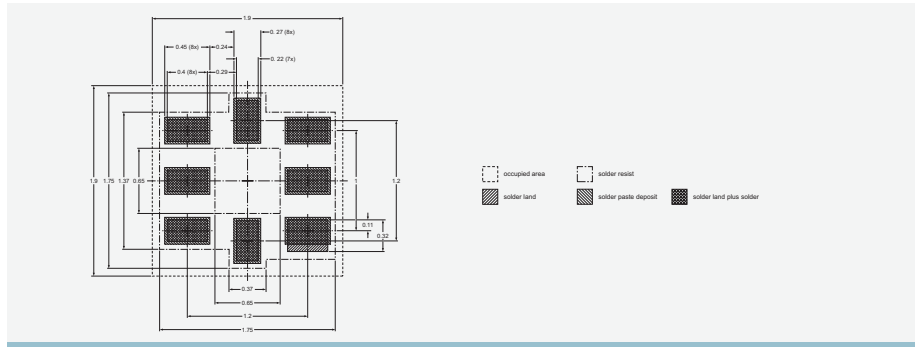
Images are for reference only, for detailed drawings please visit [nexperia.com/packages](http://nexperia.com/packages)



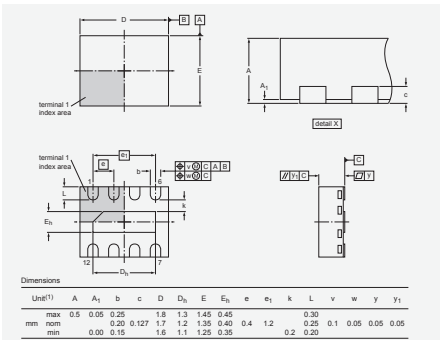
## 8-pin SMD packages



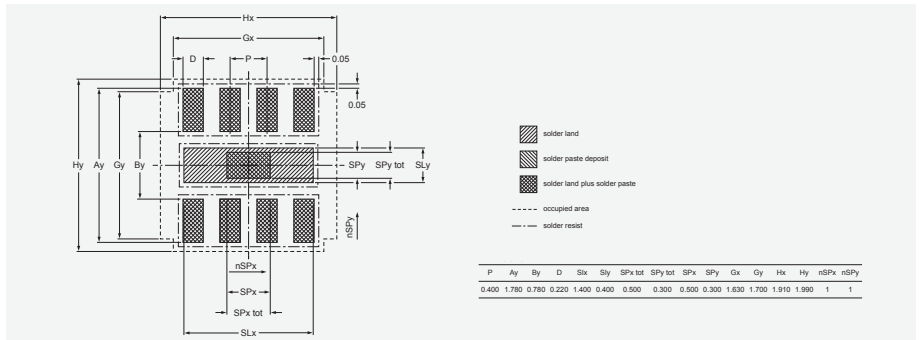
XQFN8 (SOT902-2)



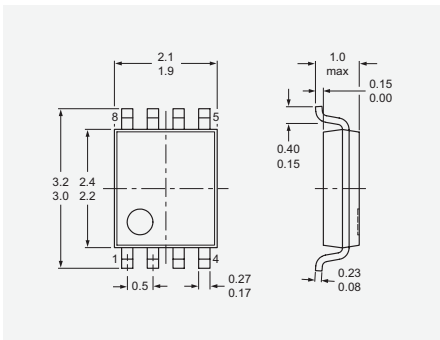
XQFN8 (SOT902-2)



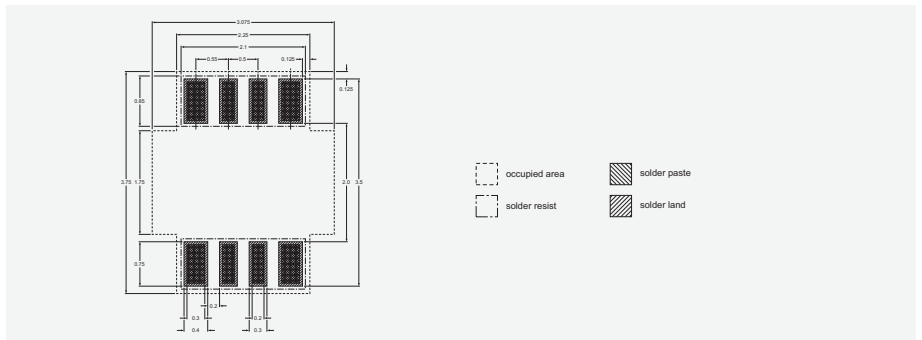
DFN1714-8 (SOT972-2)



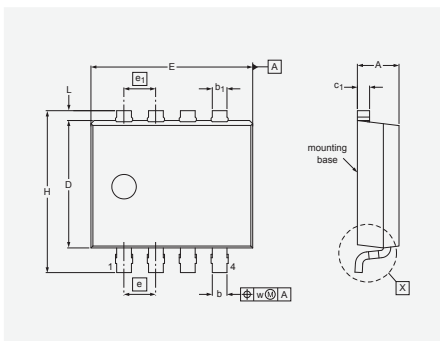
DFN1714-8 (SOT972-2)



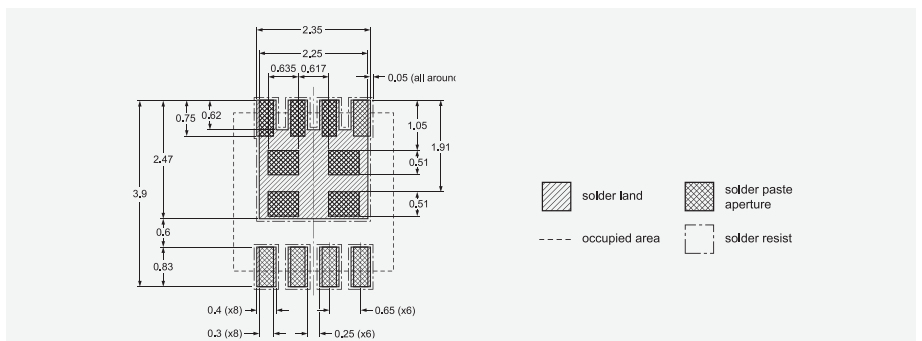
VSSOP8 (SOT765-1)



VSSOP8 (SOT765-1)



LPAK33 (SOT1210)



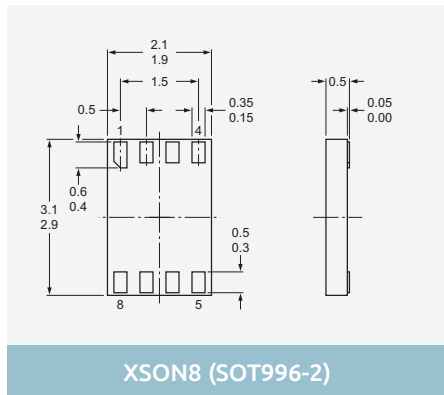
LPAK33 (SOT1210)

Dimensions in mm

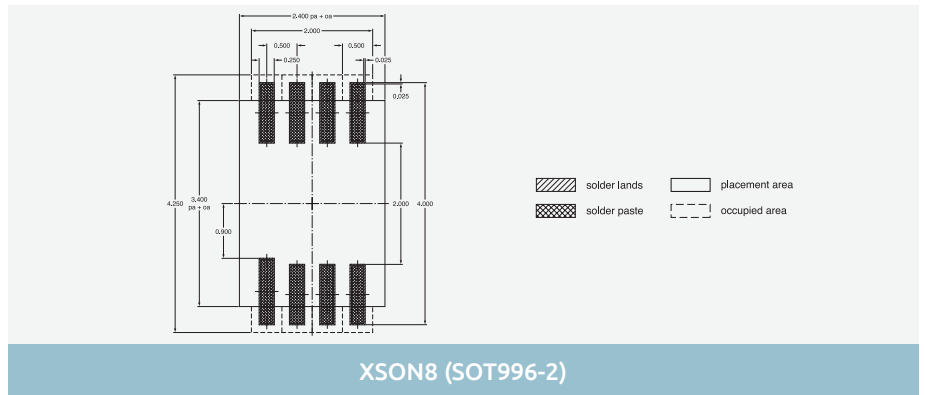
Images are for reference only, for detailed drawings please visit [nexperia.com/packages](http://nexperia.com/packages)

# Minimized outline drawings and reflow soldering footprint

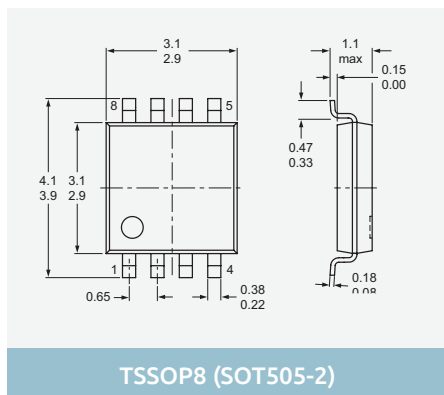
## 8-pin SMD packages



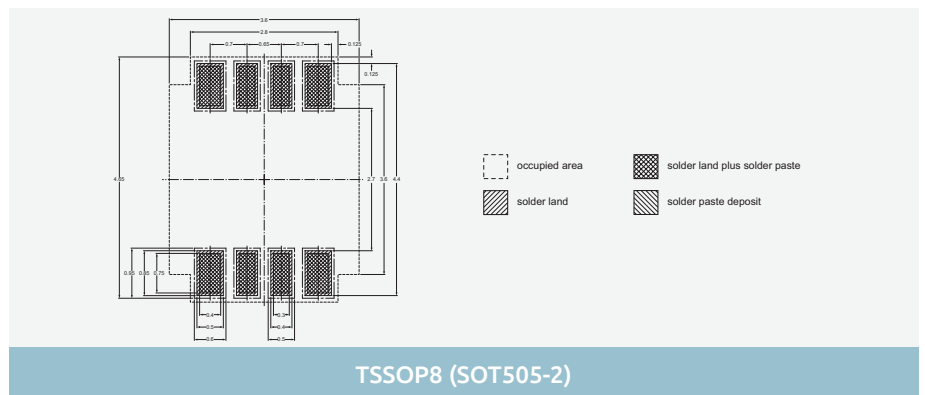
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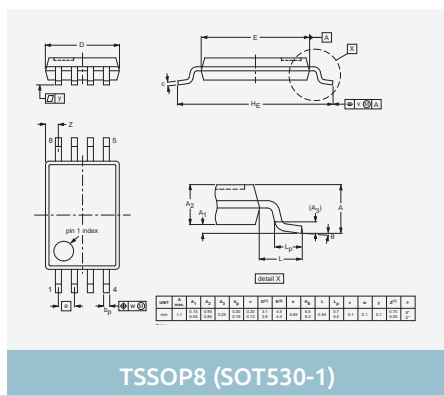
XSON8 (SOT996-2)



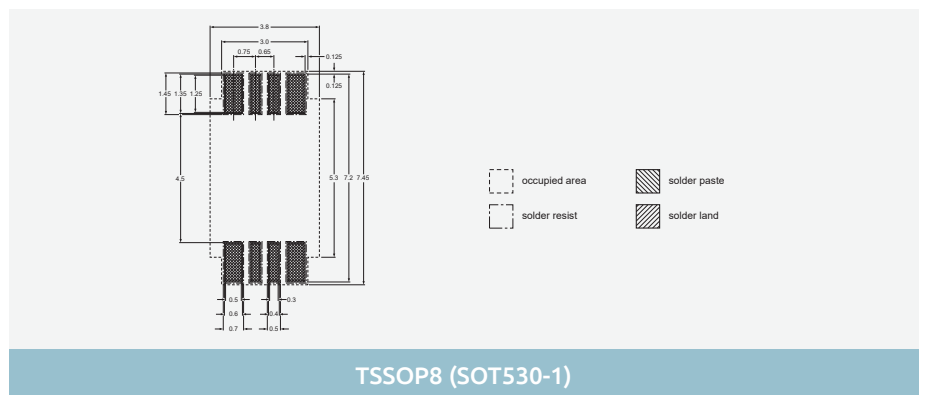
TSSOP8 (SOT505-2)



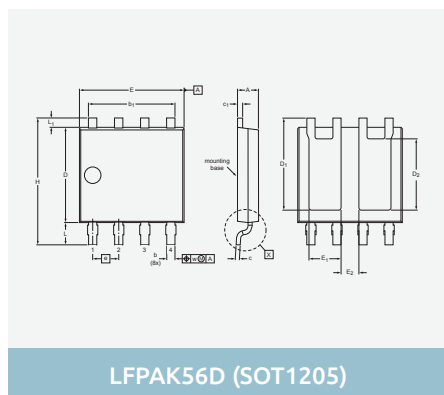
TSSOP8 (SOT505-2)



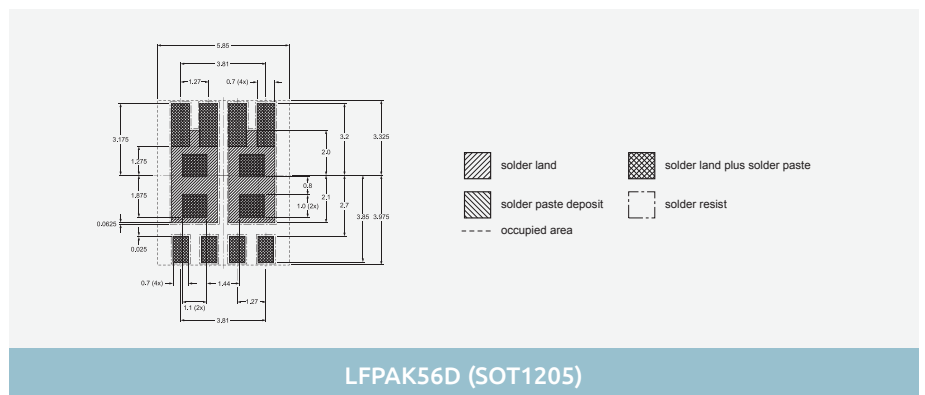
TSSOP8 (SOT530-1)



TSSOP8 (SOT530-1)



LFPAK56D (SOT1205)

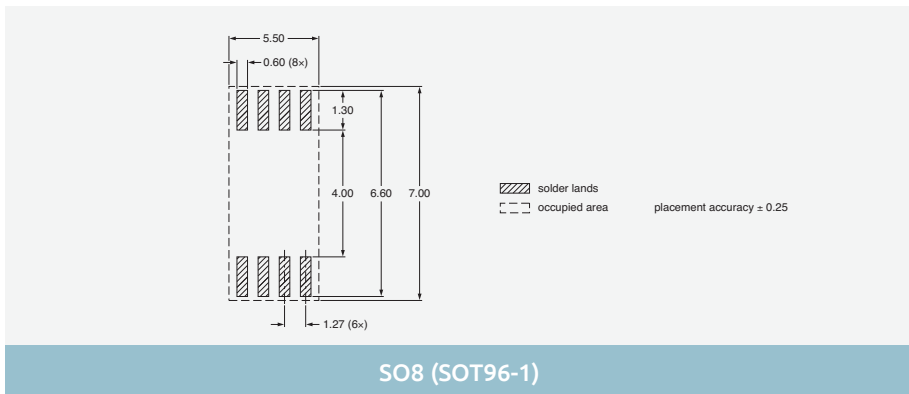
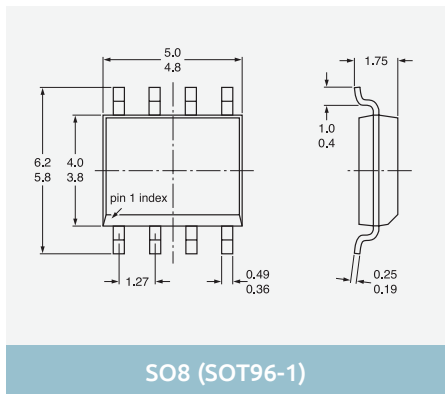


LFPAK56D (SOT1205)

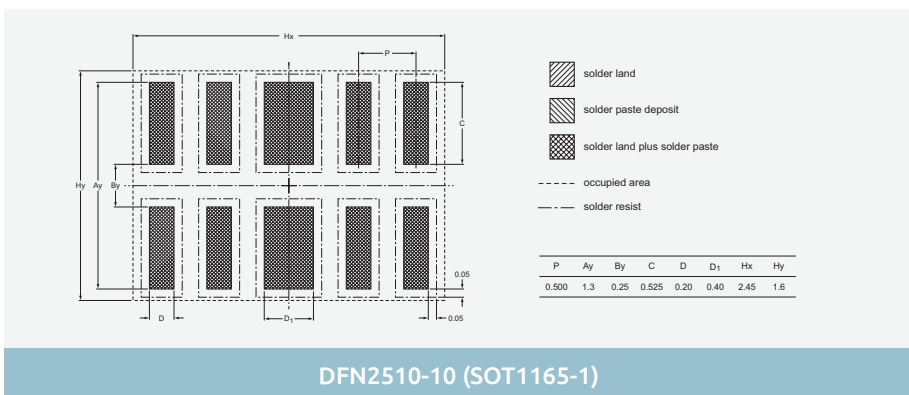
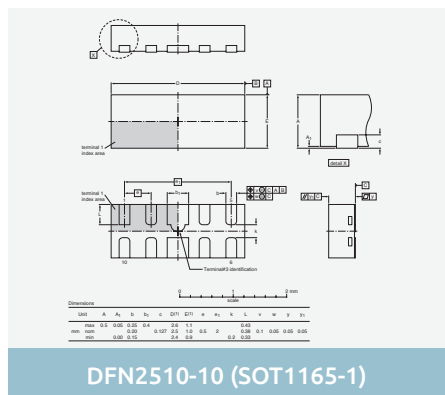
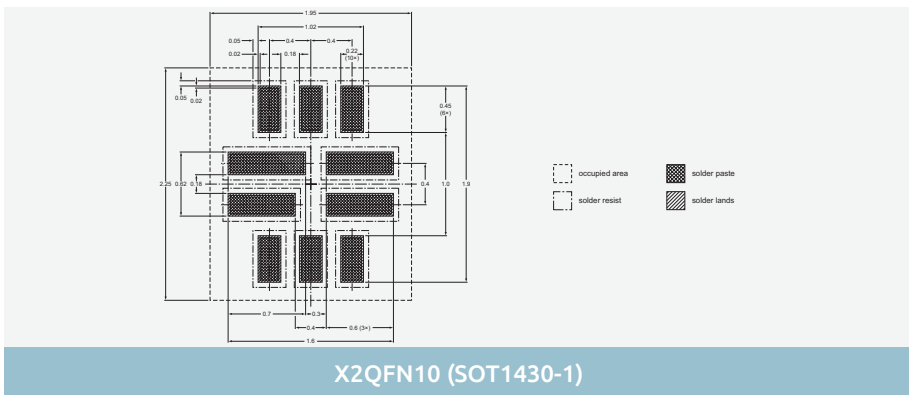
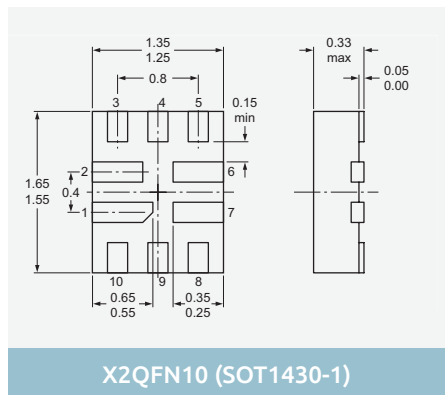
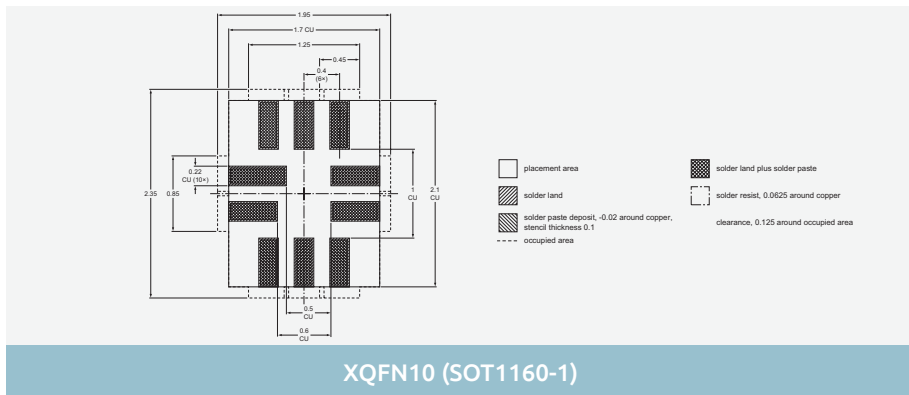
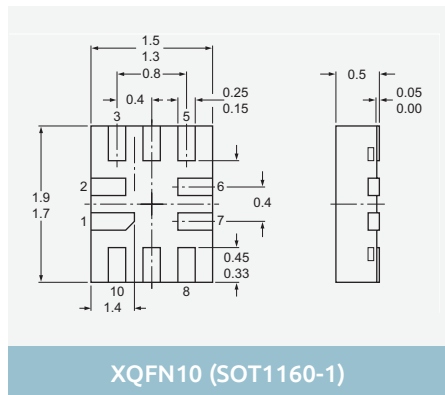
Dimensions in mm

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### 8-pin SMD packages



### 10-pin SMD packages

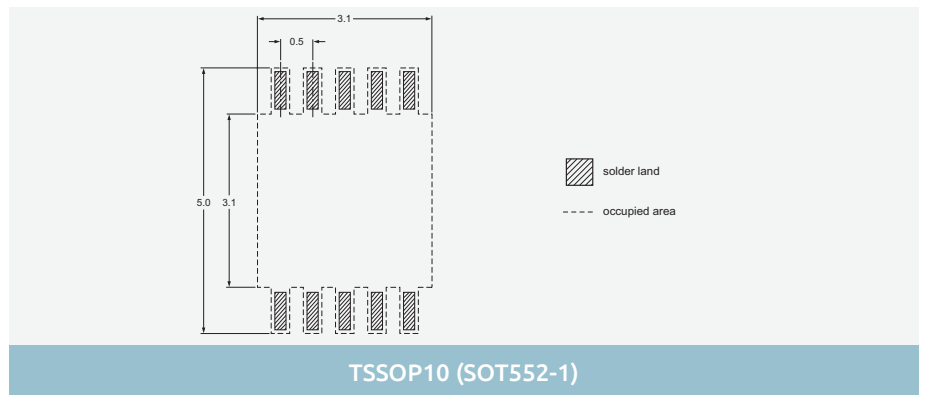
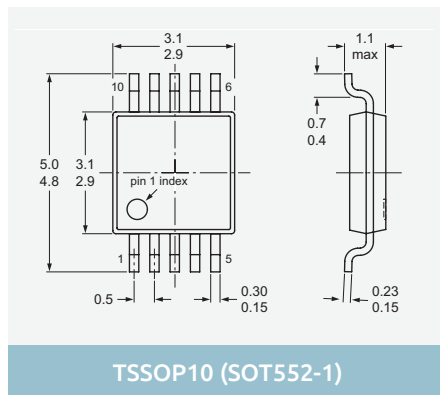
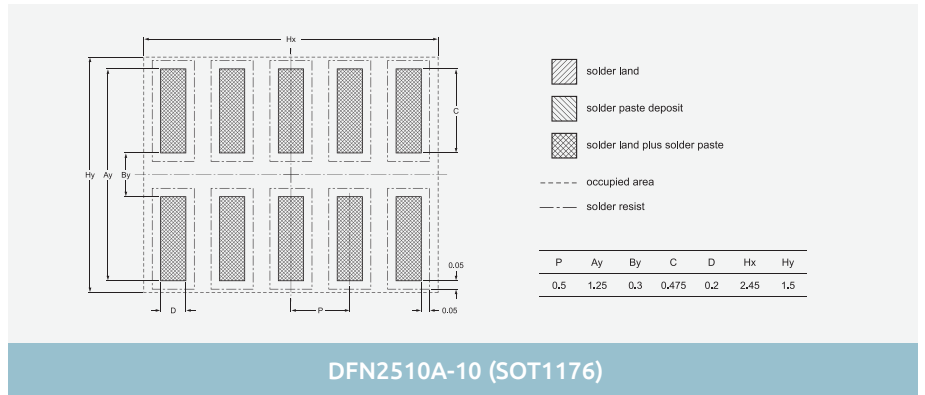
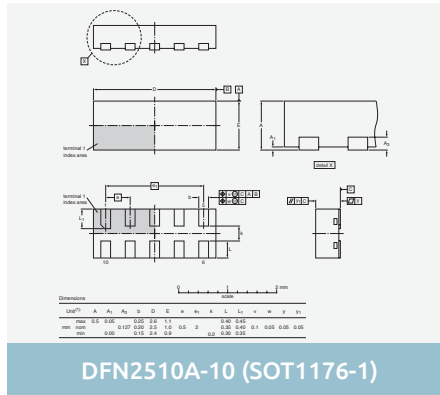


Dimensions in mm

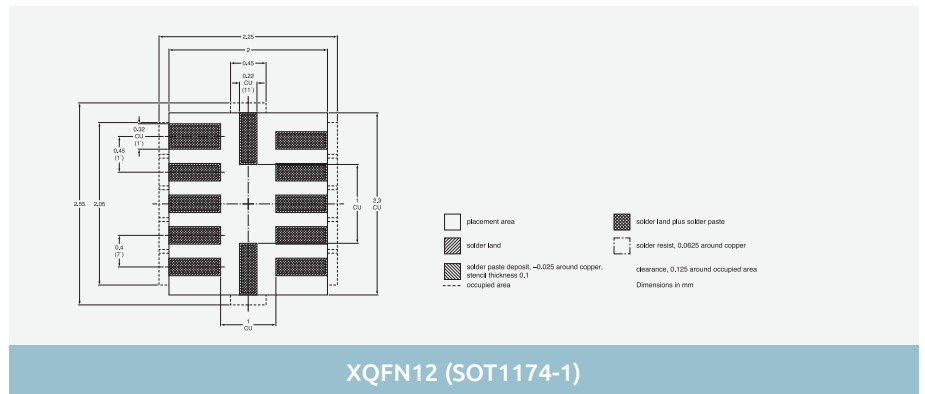
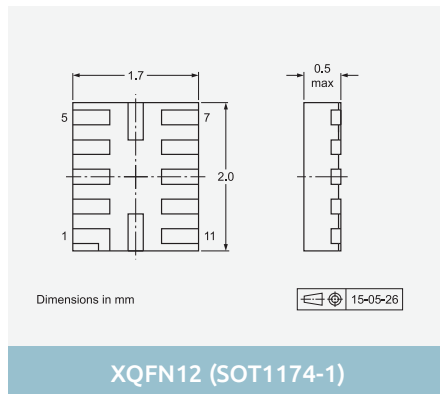
Images are for reference only, for detailed drawings please visit [nexperia.com/packages](http://nexperia.com/packages)

# Minimized outline drawings and reflow soldering footprint

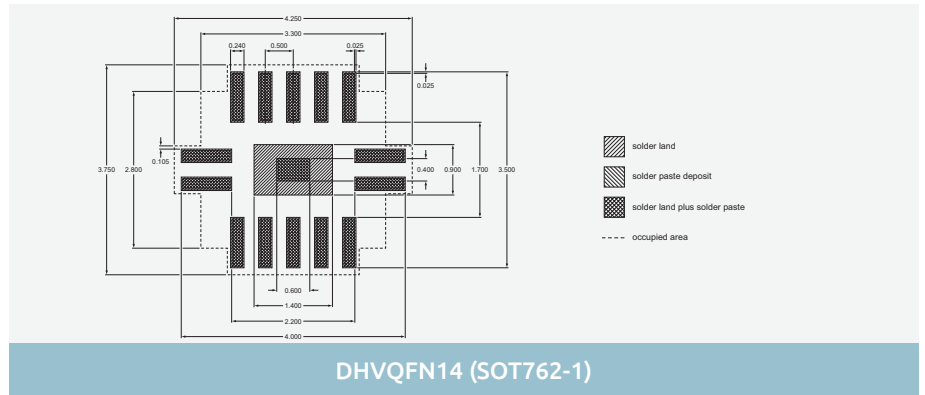
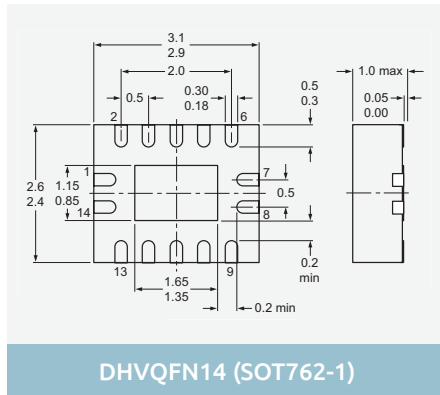
## 10-pin SMD packages



## 12-pin SMD packages



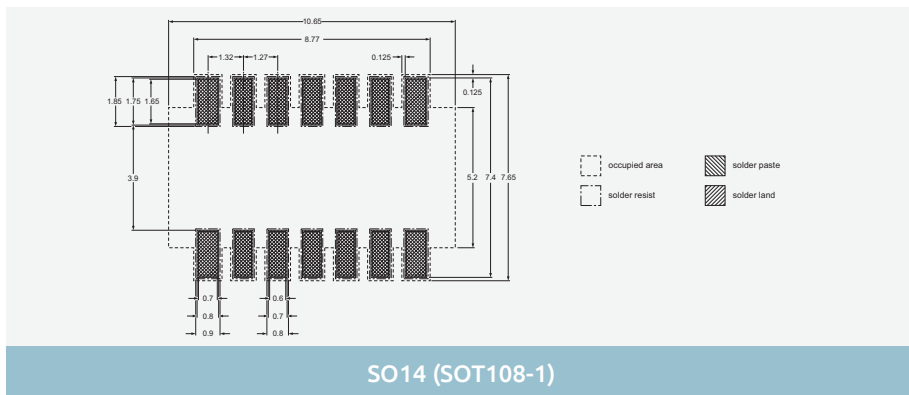
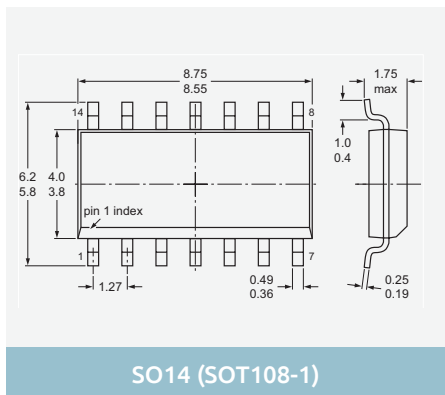
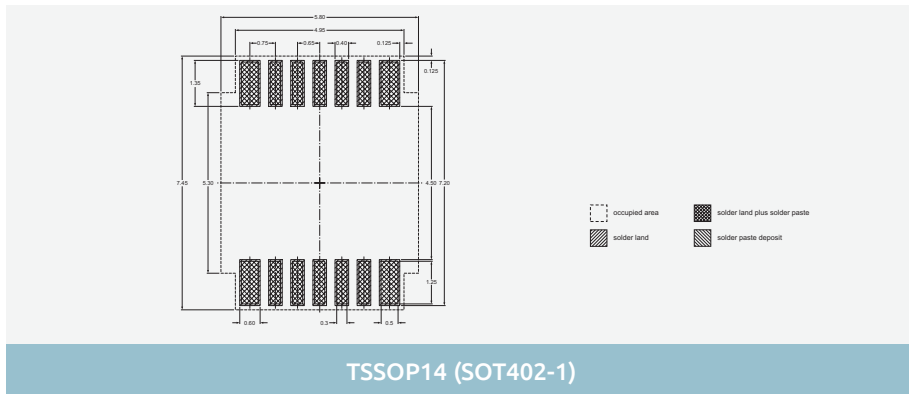
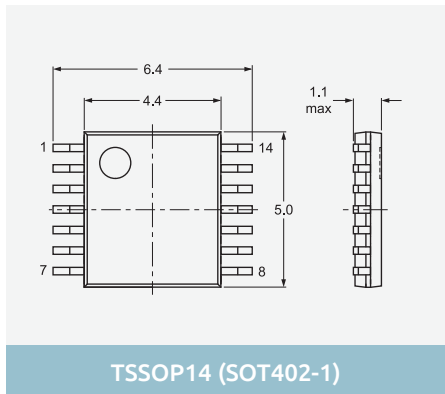
## 14-pin SMD packages



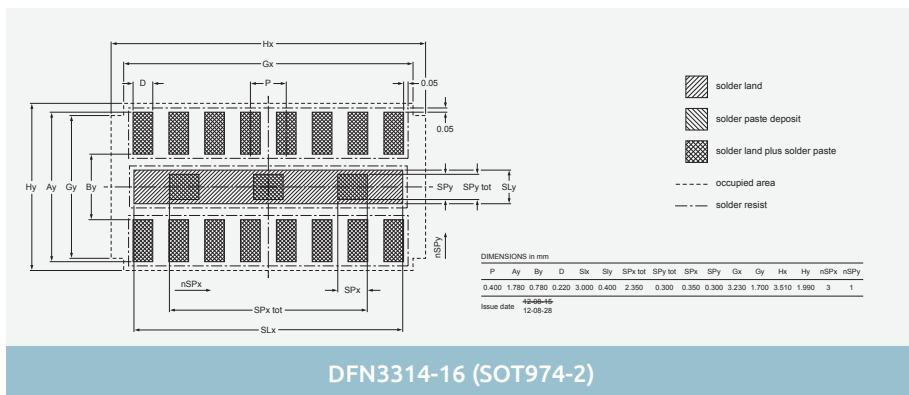
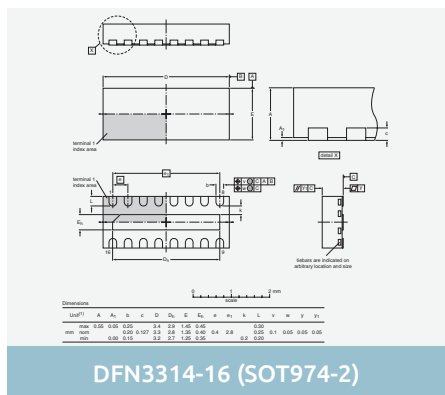
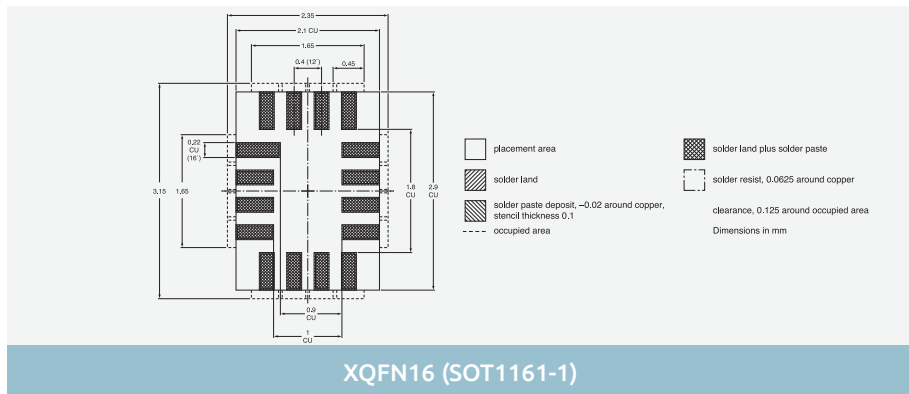
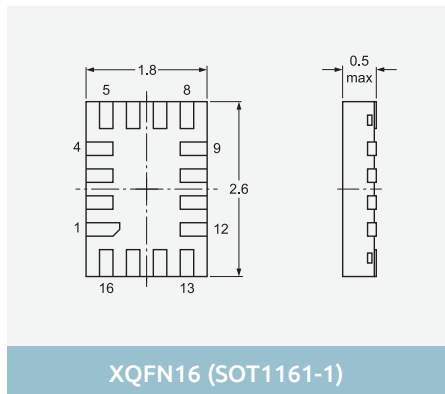
Dimensions in mm

Images are for reference only, for detailed drawings please visit [nexperia.com/packages](http://nexperia.com/packages)

## 14-pin SMD packages



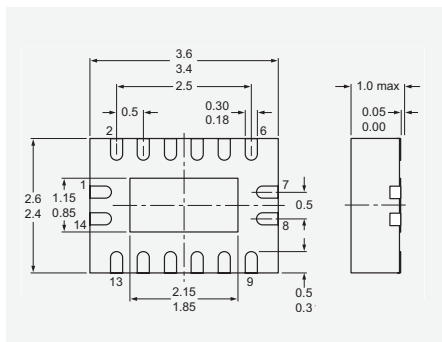
## 16-pin SMD packages



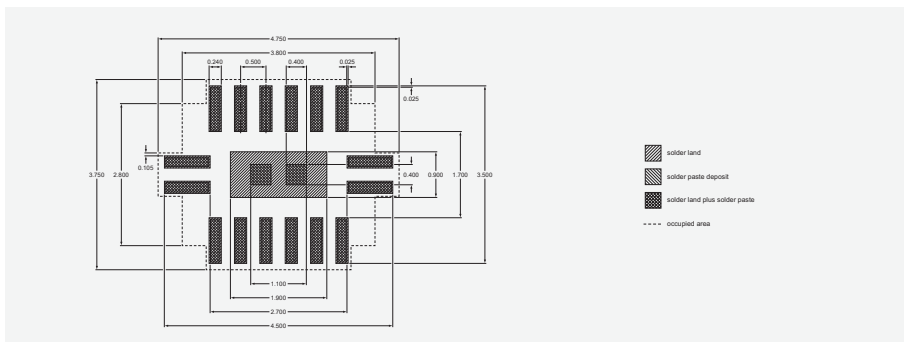
Dimensions in mm

Images are for reference only, for detailed drawings please visit [nexperia.com/packages](http://nexperia.com/packages)

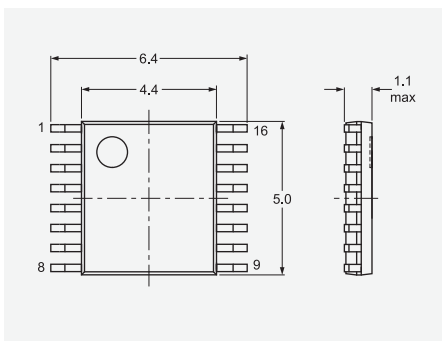
## 16-pin SMD packages



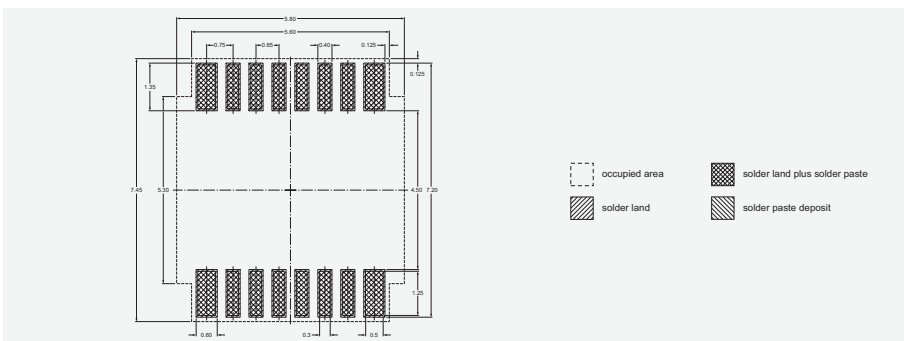
DHVQFN16 (SOT763-1)



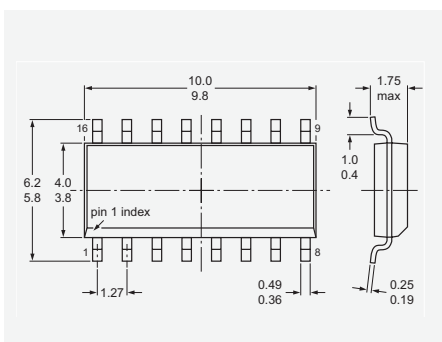
DHVQFN16 (SOT763-1)



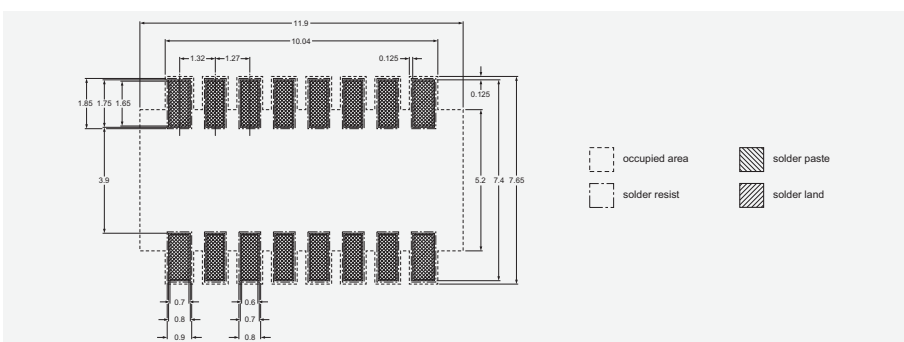
TSSOP16 (SOT403-1)



TSSOP16 (SOT403-1)

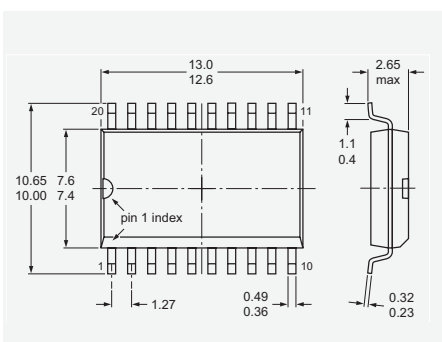


SO16 (SOT109-1)

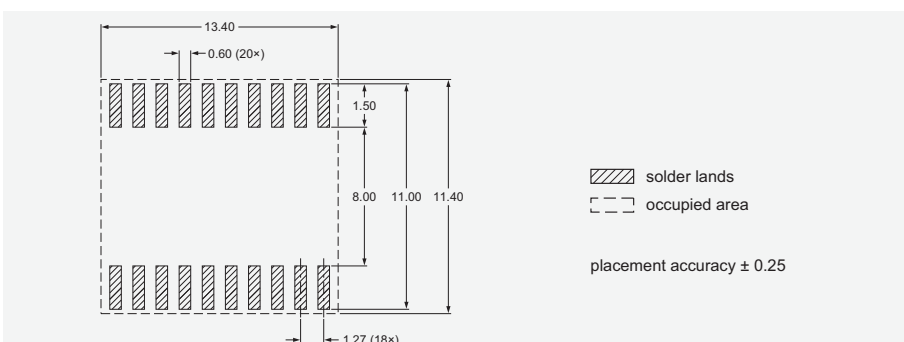


SO16 (SOT109-1)

## 20-pin SMD packages



SO20 (SOT163-1)

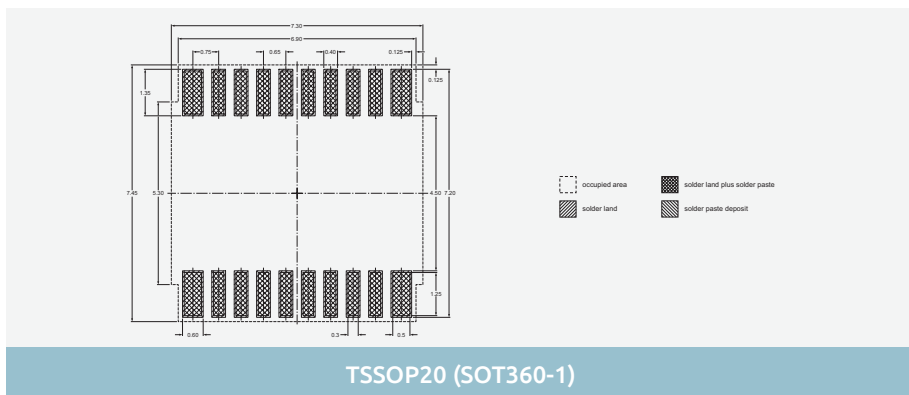
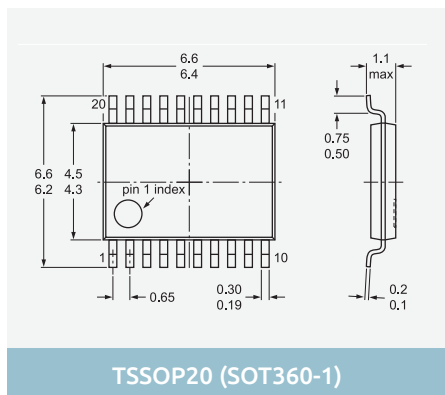
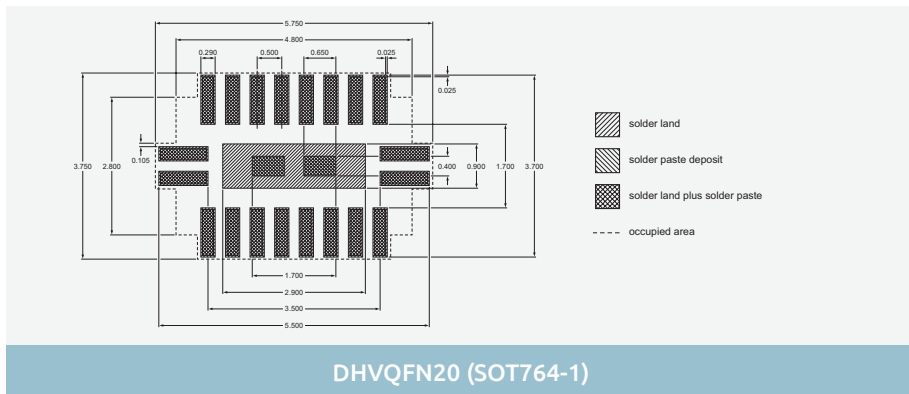
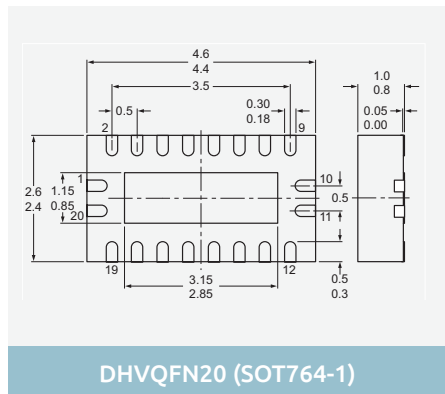


SO20 (SOT163-1)

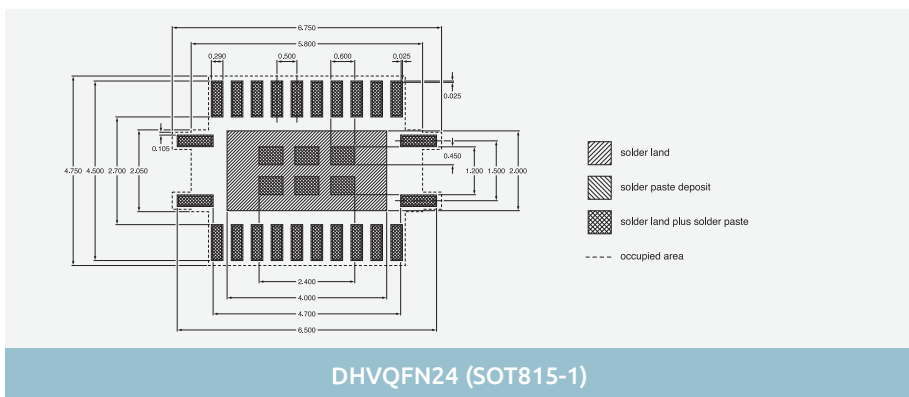
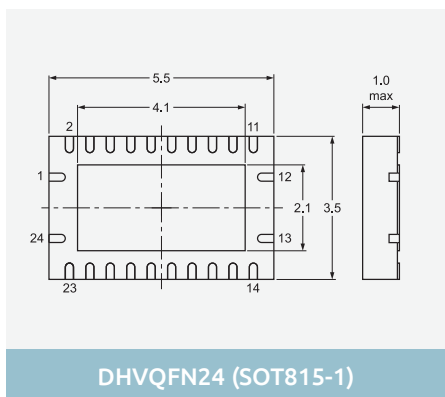
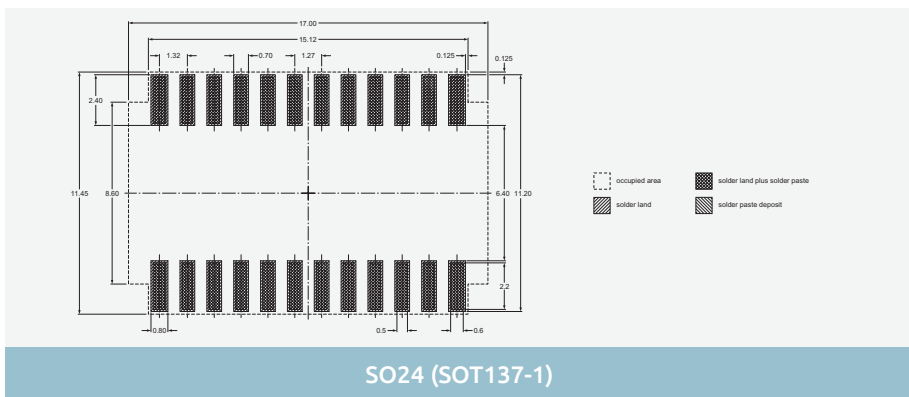
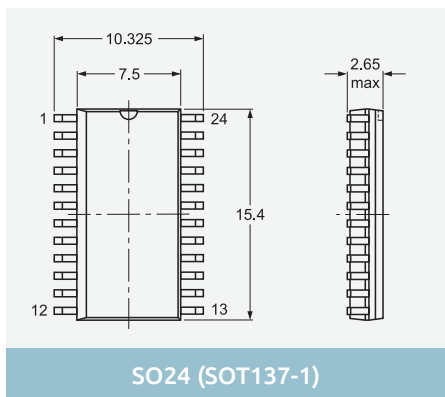
Dimensions in mm

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## 20-pin SMD packages



## 24-pin SMD packages

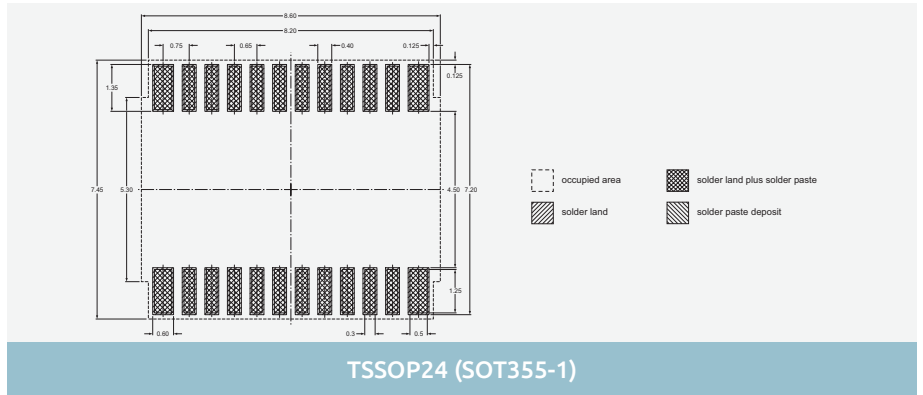
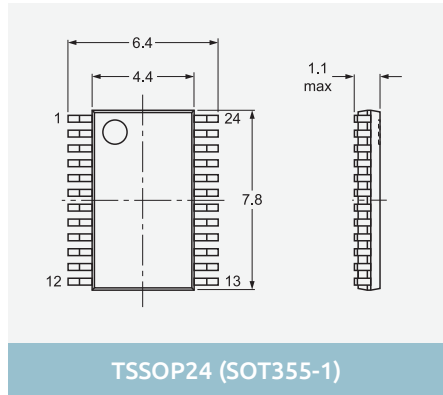


Dimensions in mm

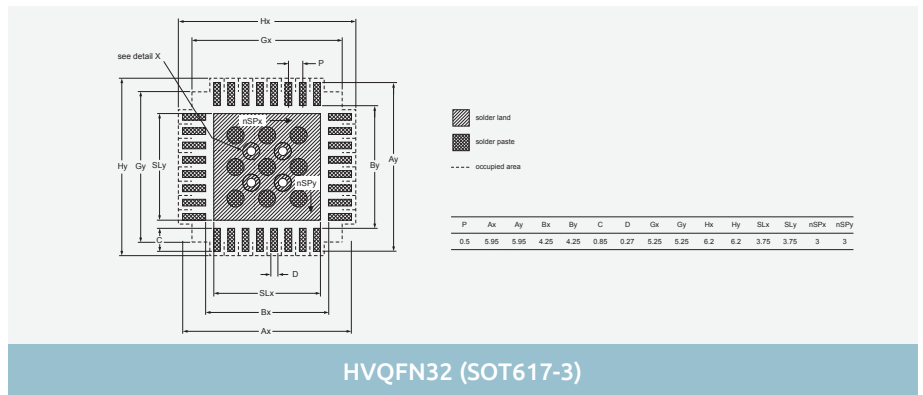
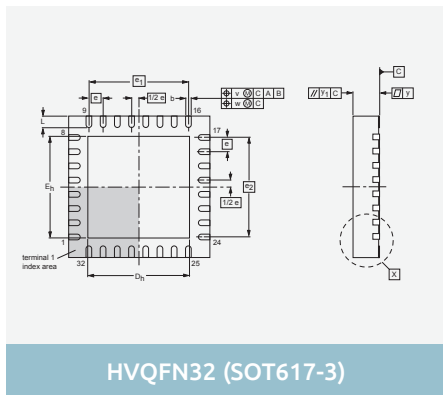
Images are for reference only, for detailed drawings please visit [nexperia.com/packages](http://nexperia.com/packages)

# Minimized outline drawings and reflow soldering footprint

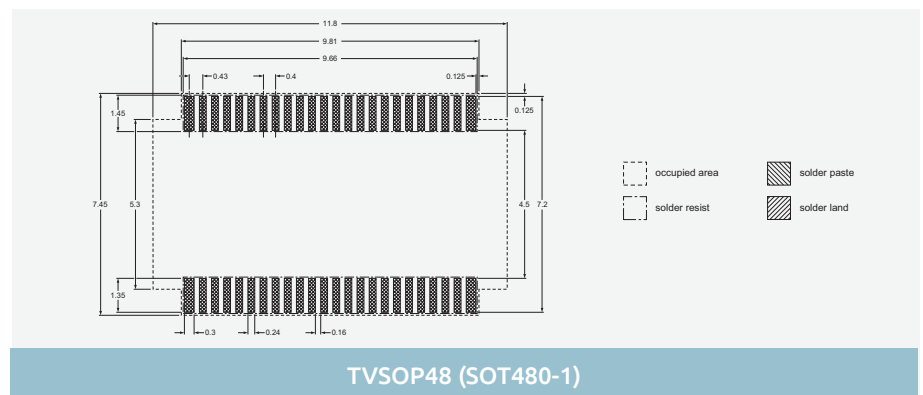
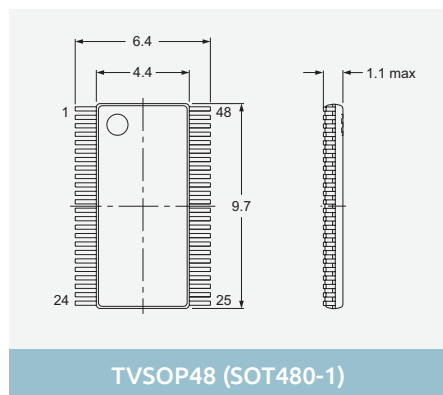
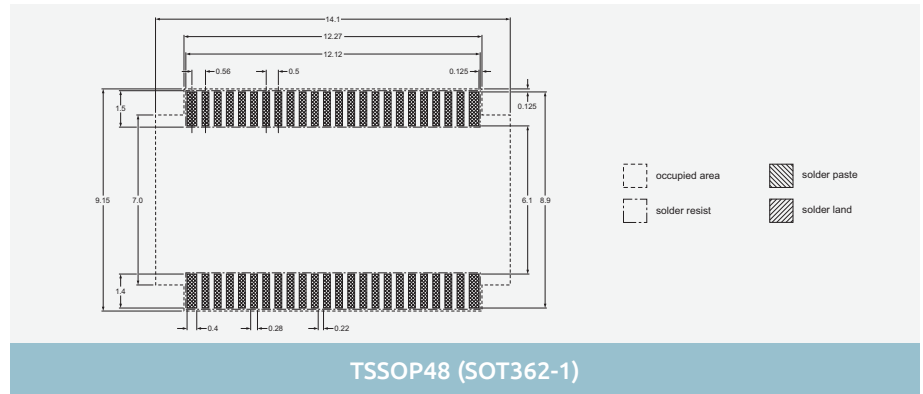
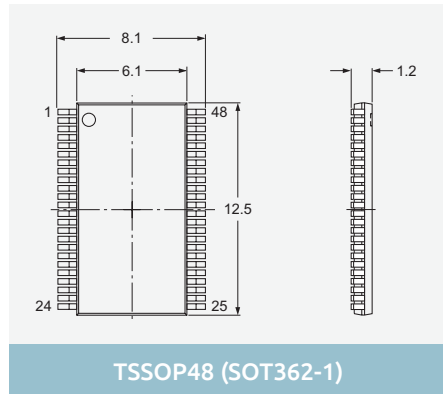
## 24-pin SMD packages



## 32-pin SMD packages



## 48-pin SMD packages

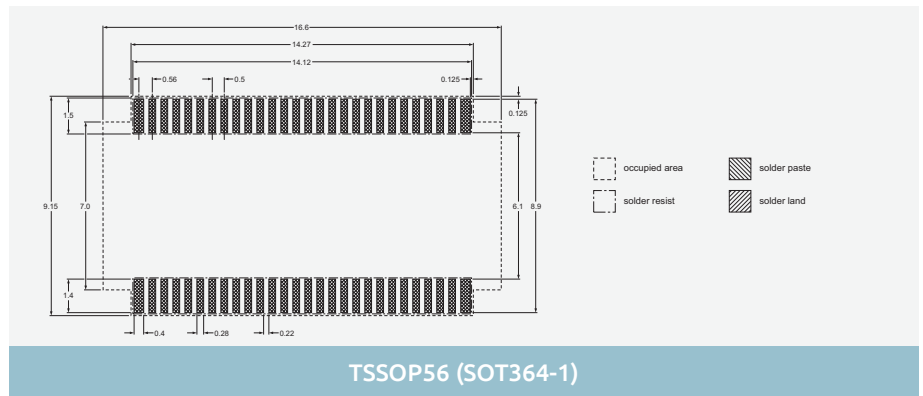
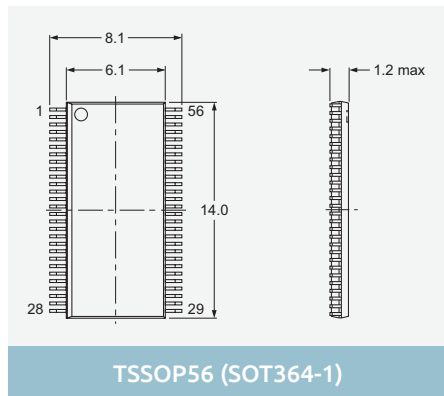


Dimensions in mm

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## 56-pin SMD packages



Dimensions in mm

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With all the essentials in one handy guide,  
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