



Title of Change:	Qualification of ON Semiconductor Vietnam (OSV) as an additional Assembly and Test location for Schottky, Ultrafast and Trench Schottky in D2PAK package.							
Proposed first ship date:	7 June 2018							
Contact information:	Contact your local ON Semiconductor Sales Office or <Phuong.Hoang@onsemi.com>							
Samples:	Contact your local ON Semiconductor Sales Office or <Phuong.Hoang@onsemi.com>							
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <cheanching.sim@onsemi.com>.							
Type of notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. ON Semiconductor will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact <PCN.Support@onsemi.com>.							
Change Part Identification:	Product from ON Semiconductor Vietnam (OSV) will be marked with site code "VN" prior to the date code.							
Change category:	<input type="checkbox"/> Wafer Fab Change <input checked="" type="checkbox"/> Assembly Change <input checked="" type="checkbox"/> Test Change <input type="checkbox"/> Other _____							
Change Sub-Category(s):	<input checked="" type="checkbox"/> Manufacturing Site Change/Addition <input checked="" type="checkbox"/> Material Change <input type="checkbox"/> Datasheet/Product Doc change <input type="checkbox"/> Manufacturing Process Change <input type="checkbox"/> Product specific change <input checked="" type="checkbox"/> Shipping/Packaging/Marking <input type="checkbox"/> Other: _____							
Sites Affected:	ON Semiconductor Sites: ON Dong Nai Province, Vietnam	External Foundry/Subcon Sites: None						
Description and Purpose:								
This Final Notification announces the planned capacity expansion of ON Semiconductor's assembly and test operations of D2PAK discrete packaged products to ON Semiconductor Vietnam (OSV). Schottky, Ultrafast, and Trench Schottky products are currently being assembled and tested in ON Semiconductor Seremban (SBN) and Tongfu Fujitsu Microelectronics, China (TFME). Upon the expiration of this FPCN, the affected OPNs can be sourced from either assembly or test locations, as mentioned above. Schottky, Ultrafast, and Trench Schottky products in D2PAK package will be processed in ON Semiconductor Vietnam (OSV) with improved mold compound.								
<table border="1" style="width: 100%; text-align: center;"> <thead> <tr style="background-color: #92d050;"> <th>Material to be changed</th> <th>Before Change (SBN)</th> <th>After Change (OSV)</th> </tr> </thead> <tbody> <tr> <td>Mold Compound</td> <td>EMC-GE8000CH4ES</td> <td>EMC-G700HF</td> </tr> </tbody> </table>			Material to be changed	Before Change (SBN)	After Change (OSV)	Mold Compound	EMC-GE8000CH4ES	EMC-G700HF
Material to be changed	Before Change (SBN)	After Change (OSV)						
Mold Compound	EMC-GE8000CH4ES	EMC-G700HF						
ON Semiconductor Vietnam (OSV) is a qualified site for D2PAK Standard discrete packaged products. Products sourced from OSV have been qualified to Industrial requirements and continue remain as Pb-free, Halide free and RoHS compliant.								



Reliability Data Summary:

QV DEVICE NAME: MBRB20200CTT4G (Schottky Rectifier)

PACKAGE: D2PAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Ta = 90°C, bias = 100% of rated V	1008 hrs	0/252
HTSL	JESD22-A103	Ta = 175 °C	1008 hrs	0/252
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C max, Ton = Toff = 3.5min	15000 cyc	0/252
TC	JESD22-A104	Temp = -65°C to +150°C	1000 cyc	0/252
AC	JESD22-A102	121°C, 100% RH, 15psig, unbiased	96 hrs	0/252
H3TRB	JESD22-A101	Temp = 85°C, RH=85%, bias = 100V max	1008 hrs	0/252
PC	J-STD-020 JESD-A113	MSL 1 @ 245 °C		0/1008
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/90
SD	JSTD002	Ta = 245°C, 10 sec		0/45

QV DEVICE NAME: MURB1660CTT4G (Ultrafast Rectifier)

PACKAGE: D2PAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Ta = 150°C, Tj(est) = 175 °C, bias = 100% of rated V	1008 hrs	0/252
HTSL	JESD22-A103	Ta = 175 °C	1008 hrs	0/252
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C max, Ton = Toff = 3.5min	15000 cyc	0/252
TC	JESD22-A104	Temp = -65°C to +150°C	1000 cyc	0/252
AC	JESD22-A102	121°C, 100% RH, 15psig, unbiased	96 hrs	0/252
H3TRB	JESD22-A101	Temp = 85°C, RH=85%, bias = 100V max	1008 hrs	0/252
PC	J-STD-020 JESD-A113	MSL 1 @ 245 °C		0/1008
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/90
SD	JSTD002	Ta = 245°C, 10 sec		0/45



QV DEVICE NAME: NTSB60100CTG (Trench Schottky Rectifier)

PACKAGE: D2PAK

Test	Specification	Condition	Interval	Result
HTRB	JESD22-A108	Ta = 90°C, bias = 100% of rated V	1008 hrs	0/252
HTSL	JESD22-A103	Ta = 150 °C	1008 hrs	0/252
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, deltaTj=100°C max, Ton = Toff = 3.5min	15000 cyc	0/252
TC	JESD22-A104	Temp = -65°C to +150°C	1000 cyc	0/252
AC	JESD22-A102	121°C, 100% RH, 15psig, unbiased	96 hrs	0/252
H3TRB	JESD22-A101	Temp = 85°C, RH=85%, bias = 100V max	1008 hrs	0/252
PC	J-STD-020 JESD-A113	MSL 1 @ 245 °C		0/1008
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/90
SD	JSTD002	Ta = 245°C, 10 sec		0/45

Electrical Characteristic Summary:

Electrical characteristics are not impacted.

List of Affected Standard Parts:

Part Number	Qualification Vehicle
MBRB1045G	MBRB20200CTT4G
MBRB1045T4G	
MBRB1545CTG	
MBRB1545CTT4G	
MBRB1645T4G	
MBRB20100CTG	
MBRB20100CTT4G	
MBRB20200CTG	
MBRB20200CTT4G	
MBRB2060CTG	
MBRB2060CTT4G	
MBRB20H100CTT4G	
MBRB2515LG	
MBRB2515LT4G	
MBRB2535CTLG	
MBRB2535CTLT4G	
MBRB2545CTG	
MBRB2545CTT4G	



MBRB3030CTG	MBRB20200CTT4G	
MBRB3030CTLG		
MBRB3030CTT4G		
MBRB30H60CTT4G		
MBRB40250TG		
MBRB40250TT4G		
MBRB4030G		
MBRB4030T4G		
MBRB41H100CTT4G		
MBRB60H100CTT4G		
MBRB8H100T4G		
MURB1620CTG		MURB1660CTT4G
MURB1620CTRG		
MURB1620CTRT4G		
MURB1620CTT4G		
MURB1660CTG		
MURB1660CTT4G		
MURHB840CTG		
MURHB840CTT4G		
MURHB860CTT4G	NTSB60100CTG	
NTSB20100CTG		
NTSB20100CTT4G		
NTSB20120CTG		
NTSB20120CTT4G		
NTSB30100CTG		
NTSB30100CTT4G		
NTSB30120CTG		
NTSB30120CTT4G		
NTSB30U100CTG		
NTSB30U100CTT4G		
NTSB40100CTG		
NTSB40100CTT4G		
NTSB40120CTG		
NTSB40120CTT4G		
NTSB60100CTG		
NTSB60100CTT4G		



Appendix A: Changed Products

Product	Customer Part Number	Qualification Vehicle
MBRB1045G		MBRB20200CTT4G
MBRB1045T4G		MBRB20200CTT4G
MBRB1545CTG		MBRB20200CTT4G
MBRB1545CTT4G		MBRB20200CTT4G
MBRB1645T4G		MBRB20200CTT4G
MBRB20100CTG		MBRB20200CTT4G
MBRB20100CTT4G		MBRB20200CTT4G
MBRB20200CTG		MBRB20200CTT4G
MBRB20200CTT4G		MBRB20200CTT4G
MBRB2060CTG		MBRB20200CTT4G
MBRB2060CTT4G		MBRB20200CTT4G
MBRB20H100CTT4G		MBRB20200CTT4G
MBRB2515LG		MBRB20200CTT4G
MBRB2515LT4G		MBRB20200CTT4G
MBRB2535CTLG		MBRB20200CTT4G
MBRB2535CTLT4G		MBRB20200CTT4G
MBRB2545CTG		MBRB20200CTT4G
MBRB2545CTT4G		MBRB20200CTT4G
MBRB3030CTG		MBRB20200CTT4G
MBRB3030CTLG		MBRB20200CTT4G
MBRB3030CTT4G		MBRB20200CTT4G
MBRB30H60CTT4G		MBRB20200CTT4G
MBRB40250TG		MBRB20200CTT4G
MBRB4030G		MBRB20200CTT4G
MBRB4030T4G		MBRB20200CTT4G
MBRB41H100CTT4G		MBRB20200CTT4G
MBRB60H100CTT4G		MBRB20200CTT4G
MBRB8H100T4G		MBRB20200CTT4G
MURB1620CTG		MURB1660CTT4G
MURB1620CTRG		MURB1660CTT4G
MURB1620CTRT4G		MURB1660CTT4G
MURB1620CTT4G		MURB1660CTT4G
MURB1660CTG		MURB1660CTT4G
MURB1660CTT4G		MURB1660CTT4G
MURHB840CTG		MURB1660CTT4G
MURHB840CTT4G		MURB1660CTT4G
MURHB860CTT4G		MURB1660CTT4G
NTSB20100CTG		NTSB60100CTG
NTSB20100CTT4G		NTSB60100CTG
NTSB20120CTT4G		NTSB60100CTG
NTSB30100CTG		NTSB60100CTG
NTSB30100CTT4G		NTSB60100CTG
NTSB30120CTG		NTSB60100CTG
NTSB30120CTT4G		NTSB60100CTG
NTSB30U100CTG		NTSB60100CTG
NTSB30U100CTT4G		NTSB60100CTG
NTSB40100CTG		NTSB60100CTG
NTSB40100CTT4G		NTSB60100CTG
NTSB60100CTG		NTSB60100CTG