



Initial Product/Process Change Notification

Document #: IPCN25132X

Issue Date: 14 Dec 2022

Title of Change:	TO247 Assembly and Test Qualification of Shantou Huashan (SHEDCL), China for capacity expansion.		
Proposed First Ship date:	01 Aug 2023 or earlier if approved by customer		
Contact Information:	Contact your local onsemi Sales Office or Jeanie.Wang@onsemi.com		
PCN Samples Contact:	Contact your local onsemi Sales Office. Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.		
Type of Notification:	This is an Initial Product/Process Change Notification (IPCN) sent to customers. An IPCN is an advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan. The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN). This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 90 days prior to implementation of the change. In case of questions, contact < PCN.Support@onsemi.com >		
Marking of Parts/ Traceability of Change:	The traceability of marking will be maintained by assembly plant code, date code and lot code.		
Change Category:	Test Change, Assembly Change		
Change Sub-Category(s):	Manufacturing Site Addition		
Sites Affected:			
onsemi Sites		External Foundry/Subcon Sites	
None		SHANTOU HUASHAN Electronic Devices Co., Ltd., China	
Description and Purpose:			
This Product Change Notification is to announce qualification of TO247 assembly and test sites at Shantou Huashan (SHEDCL) China.			
There are no changes in product electrical performances and specifications.			
	Before Change Description	After Change Description	
Assembly Site	onsemi Suzhou (ONSZ)	onsemi Suzhou (ONSZ)	Shantou Huashan (SHEDCL)
Test Site	onsemi Suzhou (ONSZ)	onsemi Suzhou (ONSZ)	Shantou Huashan (SHEDCL)
Die Attach (for all devices of the list)	Use Pb base solder, DA SLDR WIRE PB92.5SN5AG2.5	Use Pb base solder, DA SLDR WIRE PB92.5SN5AG2.5	Change to Pb-free solder, DA SLDR WIRE SN80AG20
The traceability of marking will be maintained by assembly plant code, data code and lot code.			
Some parts were referenced in an earlier IPCN22971X , which is now replaced by this IPCN.			



Initial Product/Process Change Notification

Document #: IPCN25132X

Issue Date: 14 Dec 2022

Qualification Plan:

QV DEVICE NAME: FCH023N65S3-F155

PACKAGE: TO247

Test	Specification	Condition	Interval
HTRB	JESD22-A108	Ta = 150°C, 100% max rated V	1008 hrs
HTGB	JESD22-A108	Ta = 150°C, 100% max rated Vgss	1008 hrs
HTSL	JESD22-A103	Ta = 150°C	1008 hrs
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/Off = 5.0 min	6000 cyc
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, 520V bias	96 hrs
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
RSH	JESD22- B106	Ta = 268°C, 10 sec	
SD	JSTD002	Ta = 245°C, 5 sec	

QV DEVICE NAME: NTHL019N65S3H

PACKAGE: TO247

Test	Specification	Condition	Interval
HTRB	JESD22-A108	Ta = 150°C, 100% max rated V	1008 hrs
HTGB	JESD22-A108	Ta = 150°C, 100% max rated Vgss	1008 hrs
HTSL	JESD22-A103	Ta = 150°C	1008 hrs
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/Off = 5.0 min	6000 cyc
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, 520V bias	96 hrs
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
RSH	JESD22- B106	Ta = 268°C, 10 sec	
SD	JSTD002	Ta = 245°C, 5 sec	



Initial Product/Process Change Notification

Document #: IPCN25132X

Issue Date: 14 Dec 2022

QV DEVICE NAME: NTHL027N65S3HF

PACKAGE: TO247

Test	Specification	Condition	Interval
HTRB	JESD22-A108	Ta = 150°C, 100% max rated V	1008 hrs
HTGB	JESD22-A108	Ta = 150°C, 100% max rated Vgss	1008 hrs
HTSL	JESD22-A103	Ta = 150°C	1008 hrs
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/Off = 5.0 min	6000 cyc
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, 520V bias	96 hrs
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
RSH	JESD22- B106	Ta = 268°C, 10 sec	
SD	JSTD002	Ta = 245°C, 5 sec	

List of Affected Parts:

Note: Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the [PCN Customized Portal](#).

Part Number	Qualification Vehicle
NTHL190N65S3HF	NTHL027N65S3HF
NTHL110N65S3F	NTHL027N65S3HF
NTHL095N65S3HF	NTHL027N65S3HF
NTHL082N65S3HF	NTHL027N65S3HF
NTHL082N65S3F	NTHL027N65S3HF
NTHL065N65S3F	NTHL027N65S3HF
NTHL065N65S3HF	NTHL027N65S3HF
NTHL050N65S3HF	NTHL027N65S3HF
NTHL040N65S3HF	NTHL027N65S3HF
NTHL040N65S3F	NTHL027N65S3HF
NTHL033N65S3HF	NTHL027N65S3HF
NTH027N65S3F-F155	NTHL027N65S3HF
NTHL027N65S3HF	NTHL027N65S3HF



Initial Product/Process Change Notification

Document #: IPCN25132X

Issue Date: 14 Dec 2022

NTHL125N65S3H	NTHL019N65S3H
NTHL095N65S3H	NTHL019N65S3H
NTHL067N65S3H	NTHL019N65S3H
NTHL019N65S3H	NTHL019N65S3H
FCH165N65S3R0-F155	FCH023N65S3-F155
FCH125N65S3R0-F155	FCH023N65S3-F155
FCH099N65S3-F155	FCH023N65S3-F155
FCH067N65S3-F155	FCH023N65S3-F155
FCH040N65S3-F155	FCH023N65S3-F155
FCH029N65S3-F155	FCH023N65S3-F155
FCH023N65S3-F155	FCH023N65S3-F155

Appendix A: Changed Products

PCN#: IPCN25132X
Issue Date: Dec 14, 2022

DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
NTHL190N65S3HF		NTHL027N65S3HF		
NTHL095N65S3HF		NTHL027N65S3HF		
NTHL082N65S3HF		NTHL027N65S3HF		
NTHL082N65S3F		NTHL027N65S3HF		
NTHL065N65S3F		NTHL027N65S3HF		
NTHL065N65S3HF		NTHL027N65S3HF		
NTHL050N65S3HF		NTHL027N65S3HF		
NTHL040N65S3HF		NTHL027N65S3HF		
NTHL040N65S3F		NTHL027N65S3HF		
NTHL033N65S3HF		NTHL027N65S3HF		
NTH027N65S3F-F155		NTHL027N65S3HF		
NTHL027N65S3HF		NTHL027N65S3HF		
NTHL125N65S3H		NTHL019N65S3H		
NTHL095N65S3H		NTHL019N65S3H		
NTHL067N65S3H		NTHL019N65S3H		
NTHL019N65S3H		NTHL019N65S3H		
FCH165N65S3R0-F155		FCH023N65S3-F155		
FCH125N65S3R0-F155		FCH023N65S3-F155		
FCH099N65S3-F155		FCH023N65S3-F155		
FCH067N65S3-F155		FCH023N65S3-F155		
FCH040N65S3-F155		FCH023N65S3-F155		
FCH029N65S3-F155		FCH023N65S3-F155		
FCH023N65S3-F155		FCH023N65S3-F155		
NTHL110N65S3F		NTHL027N65S3HF		