



Initial Product/Process Change Notification

Document #: IPCN24993X

Issue Date: 17 Oct 2022

Title of Change:	Qualification of Shantou Huashan (SHEDCL) China as dual source for TO247 FS Tech discrete IGBT	
Proposed First Ship date:	01 Jun 2023 or earlier if approved by customer	
Contact Information:	Contact your local onsemi Sales Office or Charles.Jiang@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, lot code and date code	
Change Category:	Test Change, Assembly Change	
Change Sub-Category(s):	Material Change, Manufacturing Site Addition	
Sites Affected:		
onsemi Sites	External Foundry/Subcon Sites	
None	SHANTOU HUASHAN Electronic Devices Co., Ltd., China	
Description and Purpose:		
<p>This IPCN is to inform customers that onsemi plans to qualify Shantou Huashan (SHEDCL), China as an additional assembly and test site for selected TO247 Field Stop discrete IGBT products, other than onsemi Suzhou.</p> <p>The addition of Shantou Huashan (SHEDCL), China will enable a more competitive business supports to the affected customers.</p> <p>There are no changes in product electrical performances and specifications.</p>		
	Before Change Description	After Change Description
Die Attach	PB92.5SN5AG2.5 (onsemi Suzhou)	PB93.5SN5AG1.5 (Shantou Huashan (SHEDCL),China), PB92.5SN5AG2.5 (onsemi Suzhou)
Assembly & Final Test Sites	onsemi Suzhou (onsemi Suzhou)	onsemi Suzhou (onsemi Suzhou), Shantou Huashan (SHEDCL), China
Mold Compound	SU EME 6600CS/ SU EME G700HF/ KCC KTMC-1050GFA (onsemi Suzhou)	KTMC-1050GFA (Shantou Huashan (SHEDCL), China), SU EME 6600CS/ SU EME G700HF/ KCC KTMC- 1050GFA (onsemi Suzhou)
The traceability of marking will be maintained by assembly plant code, lot code and date code.		



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Qualification Plan:

QV DEVICE NAME: FGH40T120SMD-SN00363

PACKAGE: TO-247

Test	Specification	Condition	Interval
HTRB	JESD22-A108	Ta=175°C, 100% max rated V	1008 hrs
HTGB	JESD22-A108	Ta=175°C, 100% max rated Vgss	1008 hrs
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 5 min	6000 cyc
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc
HAST or H3TRB	JESD22-A110	Ta= 110°C, 85% RH, 18.8psig, bias 42V	264 hrs
	JEDS22 A101	Ta= 85°C, 85% RH, bias, 80% max V rating	1008 hrs
uHAST	JESD22-A118	Ta= 110°C, 85% RH, 18.8psig, unbiased	264 hrs
RSH	JESD22- B106	Ta = 265C, 10 sec	
PD	JESD22-B100B	Case outline	

QV DEVICE NAME: FGH30S130P

PACKAGE: TO-247

Test	Specification	Condition	Interval
HTRB	JESD22-A108	Ta=175°C, 100% max rated V	1008 hrs
HTGB	JESD22-A108	Ta=175°C, 100% max rated Vgss	1008 hrs
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 5 min	6000 cyc
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc
HAST or H3TRB	JESD22-A110	Ta= 110°C, 85% RH, 18.8psig, bias 42V	264 hrs
	JEDS22 A101	Ta= 85°C, 85% RH, bias, 80% max V rating	1008 hrs
uHAST	JESD22-A118	Ta= 110°C, 85% RH, 18.8psig, unbiased	264 hrs
RSH	JESD22- B106	Ta = 265C, 10 sec	
PD	JESD22-B100B	Case outline	

QV DEVICE NAME: FGHL75T65MQDT

PACKAGE: TO-247

Test	Specification	Condition	Interval
HTRB	JESD22-A108	Ta=175°C, 100% max rated V	1008 hrs
HTGB	JESD22-A108	Ta=175°C, 100% max rated Vgss	1008 hrs
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 5 min	6000 cyc
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc
HAST or H3TRB	JESD22-A110	Ta= 110°C, 85% RH, 18.8psig, bias 42V	264 hrs
	JEDS22 A101	Ta= 85°C, 85% RH, bias, 80% max V rating	1008 hrs
uHAST	JESD22-A118	Ta= 110°C, 85% RH, 18.8psig, unbiased	264 hrs
RSH	JESD22- B106	Ta = 265C, 10 sec	
PD	JESD22-B100B	Case outline	

Estimated date for qualification completion: **30 January 2023**



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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
FGH60N60SMD	FGH40T120SMD-SN00363
FGH60T65SHD-F155	FGH40T120SMD-SN00363
FGH60N60SFDTU	FGH40T120SMD-SN00363
FGH75T65SHDT-F155	FGH40T120SMD-SN00363
FGH75T65SHD-F155	FGH40T120SMD-SN00363
FGH75T65UPD	FGH40T120SMD-SN00363
FGH60N60UFDTU	FGH40T120SMD-SN00363
FGH75T65UPD-F155	FGH40T120SMD-SN00363
FGH40T65SHDF-F155	FGH40T120SMD-SN00363
FGH75T65SQD-F155	FGHL75T65MQDT
FGHL40T65LQDT	FGHL75T65MQDT
FGHL40T65MQD	FGHL75T65MQDT
FGHL40T65MQDT	FGHL75T65MQDT
FGHL50T65LQDT	FGHL75T65MQDT
FGHL50T65MQD	FGHL75T65MQDT
FGHL50T65MQDT	FGHL75T65MQDT
FGHL75T65LQDT	FGHL75T65MQDT
FGHL75T65MQD	FGHL75T65MQDT
FGHL75T65MQDT	FGHL75T65MQDT
FGH75T65SQDT-F155	FGHL75T65MQDT
FGH50T65SQD-F155	FGHL75T65MQDT
FGH30S130P	FGH30S130P

Appendix A: Changed Products

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DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
FGH60N60SMD		FGH40T120SMD-SN00363		
FGH60N60SFDTU		FGH40T120SMD-SN00363		
FGH75T65SHDT-F155		FGH40T120SMD-SN00363		
FGH75T65SHD-F155		FGH40T120SMD-SN00363		
FGH75T65UPD		FGH40T120SMD-SN00363		
FGH60N60UFDTU		FGH40T120SMD-SN00363		
FGH40T65SHDF-F155		FGH40T120SMD-SN00363		
FGH75T65SQD-F155		FGHL75T65MQDT		
FGHL40T65MQD		FGHL75T65MQDT		
FGHL40T65MQDT		FGHL75T65MQDT		
FGHL50T65MQDT		FGHL75T65MQDT		
FGHL75T65LQDT		FGHL75T65MQDT		
FGHL75T65MQD		FGHL75T65MQDT		
FGHL75T65MQDT		FGHL75T65MQDT		
FGH75T65SQDT-F155		FGHL75T65MQDT		
FGH50T65SQD-F155		FGHL75T65MQDT		
FGH60T65SHD-F155		FGH40T120SMD-SN00363		
FGH30S130P		FGH30S130P		