ON Semiconductor®

Final Product/Process Change Notification

Document # : FPCN22395X
Issue Date: 07 August 2018

Title of Change:	PIM 1200V Q0PACK & Q2PACK Alternate Assembly Site Qualification.
Proposed first ship date:	14 November 2018 *or earlier upon customer approval*
Contact information:	Contact your local ON Semiconductor Sales Office or <way-shan.yong@onsemi.com>.
Samples:	Contact your local ON Semiconductor Sales Office or <PCN.samples@onsemi.com>.
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <Choonbae.Park@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 date code WW40 onwards
Change Category:	☐ Wafer Fab Change ☑ Assembly Change ☐ Test Change ☐ Other _____

Change Sub-Category(s):

☑ Manufacturing Site Addition
☐ Manufacturing Site Transfer
☐ Manufacturing Process Change
☐ Material Change
☐ Product specific change
☐ Datasheet/Product Doc change
☐ Shipping/Packaging/Marking
☐ Other: _____

Sites Affected:	ON Semiconductor Sites: ON Seremban, Malaysia	External Foundry/Subcon Sites: None

Description and Purpose:

This FPCN announces the addition of assembly site for PIM 1200V Q0PACK & Q2PACK to increase capacity and Mfg flexibility. The change is planned in adding 1 Onsemi site – Onsemi Seremban. Onsemi Seremban is a qualified assembly and test site for PIM module.

Upon the expiration of this PCN, PIM 1200V Q0PACK & Q2PACK modules will be processed at Onsemi and Subcon (existing site) concurrently. These products will be qualified to industrial requirements.

Q0PACK:

Material to be changed	Before Change Description	After Change Description
Bond Wire	TANW 12 mil with Ni doped	12 mil ALH11
Glue	Material: Silicone Glue TSE-322	Material: DC 3-6265 HP (Black)

Q2PACK:

Material to be changed	Before Change Description	After Change Description
Solder Resist	Applied Solder Resist	No Solder Resist
Bond Wire	TANW 12 mil with Ni doped	12 mil ALH11
Base Plate	SDI Base Plate	Kobe Base Plate SDI Base Plate (Alternate)
Glue	Material: Silicone Glue TSE-322	Material: DC 3-6265 HP (Black)

Product Marking:

	From	To
Product marking change		

Reliability Data Summary:

QV DEVICE NAME : NXH80T120L2Q0S2G
NXH160T120L2Q2F2SG
PACKAGE: Q0Pack, Q2Pack and Qx platform (Die level test; HTRB, H3TRB)

Test	Specification	Condition	Interval	Results
HTRB (CN68)	JESD22-A108	Tj = 150°C for 1008 hours , Vce=520V	1008 Hrs	0/11
HTRB (CN75 FSII 384kGy)	JESD22-A108	Tj = 150°C for 1008 hours , Vce=520V	1008 Hrs	0/11
HTRB (DG6630)	JESD22-A108	Tj = 150°C for 1008 hours , Vce=520V	1008 Hrs	0/33
H3TRB (CN68)	JESD22-A101	Ta=85°C, 85% RH, 520V max	1008 Hrs.	0/11
H3TRB (CN75 FSII 385kGy)	JESD22-A101	Ta=85°C, 85% RH, 520V max	1008 Hrs.	0/11
H3TRB (DG6630)	JESD22-A101	Ta=85°C, 85% RH, 520V max	1008 Hrs.	0/33
TC (Q0Pack)	JESD22-A104	Ta = -40 to 125C	100 Cyc	0/11
TC (Q2Pack)	JESD22-A104	Ta = -40 to 125C	100 Cyc	0/11
SD (Q2Pack)	JESD22-B102	PbSn solder 215C,5S, ->Preconditioning (93C steam aging, 8H)		0/11
SD (Q2Pack)	JESD22-B102	Pb free solder 245C,5S, ->Preconditioning (93C steam aging, 8H)		0/11

*** DG6630 was first time to be assembled in SBN site so tested with 3 lots but the other die sets were already tested in other projects (QBS, Qual By Similarity) but they are tested with 1lot for confirming of 650V rating.

Electrical Characteristic Summary:

Electrical Characteristic is not impacted by this change.

List of Affected Parts:

Part Number	Qualification Vehicle
NXH80T120L2Q0S2G	NXH80T120L2Q0S2G
SNXH80T120L2Q0S2G	
NXH80T120L2Q0S2TG	
NXH160T120L2Q2F2SG	NXH160T120L2Q2F2SG