Final Product/Process Change Notification

Document #:FPCN25631ZA
Issue Date:12 Dec 2023

Title of Change:	Qualification of IGBT Technology onsemi Bucheon 8inch Fab in Korea
Proposed Changed Material First Ship Date:	13 Jun 2024 or earlier if approved by customer
Current Material Last Order Date:	N/A *Orders received after the Current Material Last Order Date expiration are to be considered as orders for new changed material as described in this PCN. Orders for current (unchanged) material after this date will be per mutual agreement and current material inventory availability*.
Current Material Last Delivery Date:	N/A *The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory*
Product Category:	Active components – Discrete components
Contact information:	Contact your local onsemi Sales Office or Susan.Du@onsemi.com
PCN Samples Contact:	Contact your local onsemi Sales Office to place sample order. Sample requests are to be submitted no later than 45 days after publication of this change notification. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Sample Availability Date:	01 Mar 2024
PPAP Availability Date:	01 Mar 2024
Additional Reliability Data:	Contact your local onsemi Sales Office or Marco.kang@onsemi.com
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. The change will be implemented at 'Proposed Change Material First Ship Date' in compliance to J-STD-46 or ZVEI, or earlier upon customer approval, or per our signed agreements. onsemi will consider this proposed change and it's conditions acceptable, unless an inquiry is made in writing within 45 days of delivery of this notice. To do so, contact PCN.Support@onsemi.com.

Change Category

Category	**Type of Change**
Process - Wafer Production	Move of all or part of wafer fab to a different location/site/subcontractor, New wafer diameter
Equipment	Production from a new equipment/tool which uses the same basic technology (replacement equipment or extension of existing equipment pool) without change of process.

Description and Purpose:

This FPCN announces the planned IGBT fab site change to onsemi Korea 8 inch Fab from onsemi Korea 6 inch Fab. Other wafer back side processes and probes are compatible with both wafer diameters, so there is no change.

	From	**To**
Fab Site	onsemi, Bucheon, Korea 6inch Fab	onsemi, Bucheon, Korea 6/8inch Fab
Wafer size	150 mm	150mm and 200 mm

Reason / Motivation for Change:	Capacity improvement
Anticipated impact on fit, form, function, reliability, product safety or manufacturability:	The device has been qualified and validated based on the same Product Specification. The device has successfully passed the qualification tests. Potential impacts can be identified, but due to testing performed by onsemi in relation to the PCN, associated risks are verified and excluded. No anticipated impacts.

Sites Affected:

onsemi Sites	**External Foundry/Subcon Sites**
onsemi Bucheon, Korea	None

Marking of Parts/ Traceability of Change:	Changed material can be identified by lot code.

Reliability Data Summary:

QV DEVICE NAME: FGB20N60SFD_F085 (QV1)
RMS: K89258, O90297, K90915, S89749
PACKAGE: D2PAK-3

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Tj=150°C, 80% rated V	1008hrs	0/77
HTGB	JESD22-A108	Ta=150°C, 100% max rated Vgss	1008 hrs	0/77
HTSL	JESD22-A103	Ta=150°C	1008hrs	0/77
PC	J-STD-020 / JESD-A113	MSL 1 @ 245°C, Surface mount pkgs only	-	-
PC+IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 3.5min	8572cyc	0/77
PC+TC	JESD22-A104	Ta= -55°C to +150°C	1000cyc	0/77
PC+HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96hrs	0/77
PC+uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96hrs	0/77
RSH	JESD22- B106	Ta = 265°C, 10 sec Required for through hole devices only		0/10

Refer to the attached AEC1 Pager for more details.

To view attachments:
1. Download pdf copy of the PCN to your computer
2. Open the downloaded pdf copy of the PCN
3. Click on the paper clip icon available on the menu provided in the left/bottom portion of the screen to reveal the Attachment field
4. Then click on the attached file.

Electrical Characteristics Summary:

Electrical characteristics are not impacted.

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.***

Current Part Number	New Part Number	Qualification Vehicle
FGB20N60SFD-F085	NA	FGB20N60SFD-F085
FGH40N60SMD-F085	NA	FGB20N60SFD-F086