Final Product/Process Change Notification

Document #:FPCN22966ZR
Issue Date:08 Nov 2021

Title of Change:	Qualification of Automotive FS3 trench IGBT 12inch Technology at Global Foundries in New York, US for Wafer Fab Capacity Expansion
Proposed Changed Material First Ship Date:	31 Oct 2022 or earlier if approved by customer
Current Material Last Order Date:	26 Jul 2022 *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:	30 Oct 2022 *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 Bokyun.Seo@onsemi.com
PCN Samples Contact:	Contact your local onsemi Sales Office to place sample order or <PCN.samples@onsemi.com>. 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:	17 Dec 2021
PPAP Availability Date:	17 Dec 2021
Additional Reliability Data:	Contact your local onsemi Sales Office or Byeongyeop.Lee@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
Test Flow	Move of all or part of electrical wafer test and/or final test to a different location/site/subcontractor
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 Product Change Notification, is the continuation from IPCN22966ZD, which is intended to increase capacity for onsemi automotive FS3 IGBT technology products by transferring wafer fabrication for these products to the Global Foundries Fab located in New York, US.

The changes include transferring wafer fabrication, back grind and back metal, to Global Foundries, and utilizing 300mm instead of 200mm diameter wafers. And while the assembly location remains unchanged (at onsemi, Suzhou, China), wafer saw and die attach tooling are being updated to accommodate 300mm wafers.

	Before Change	After Change
Wafer Fabrication Site	onsemi Bucheon, Korea, onsemi Aizu, Japan	Global Foundries, US, onsemi Bucheon, Korea (200mm), onsemi Aizu, Japan (200mm)
Wafer Diameter	200mm (existing sites)	300mm (Global Foundries), 200mm (existing sites)
Wafer Probe Site	onsemi Bucheon, Korea	Global Foundries, US, onsemi Bucheon, Korea
Back Grind, Back Metal Site	onsemi Bucheon, Korea	Global Foundries, US. onsemi Bucheon, Korea

There is no change to the orderable part number.

There is no product marking change as a result of this change.

Reason / Motivation for Change:	Source/Supply/Capacity Changes Process/Materials Change
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 Aizu, Japan	Global Foundries East Fishkill, New York, United States
onsemi Bucheon, Korea	

Marking of Parts/ Traceability of Change:	No change of Marking of Parts / Traceability of Change

Reliability Data Summary:

QV DEVICE NAME: FGH75T65SHD-F155, FGH75T65SHDT-F155, FGH60T65SHD-F155, FGY160T65SPD-F085
RMS: U78532, U78534, U78535, U78536, U76790, U74188, U74191, U72040
PACKAGE: TO247

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=175°C, 100_% max rated V	1008 hrs	0/240
HTGB	JESD22-A108	Ta=175°C, 100_% max Vge	1008 hrs	0/240
HTSL	JESD22-A103	Ta=175°C, No bias	1008 hrs	0/240
TC	JESD22-A104	Ta= -55°C to + 150_°C	1000 cyc	0/240
HAST	JESD22-A110	130°C, 85% RH, 18.8psia, bias	96 hrs	0/240
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
IOL	ML-STD-750	Ta=25°C, delta Tj=100°C On/Off = 5min	3000 cyc	0/240

NOTE: AEC-1pager is attached.

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
AFGY120T65SPD-B4	NA	FGY160T65SPD-F085
FGY160T65SPD-F085E	NA	FGY160T65SPD-F085
FGY120T65SPD-F085	NA	FGY160T65SPD-F085
AFGY160T65SPD-B4	NA	FGY160T65SPD-F085
FGY160T65SPD-F085	NA	FGY160T65SPD-F085