



Final Product/Process Change Notification

Document #:FPCN22966ZW

Issue Date: 08 Sep 2022

Title of Change:	Wafer Fab Transfer for Trench 6 MOSFET Technology to Global Foundries in New York, US.
Proposed Changed Material First Ship Date:	08 Mar 2023 or earlier if approved by customer
Current Material Last Order Date:	30 Dec 2022 <i>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.</i>
Current Material Last Delivery Date:	07 Mar 2023 <i>The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory</i>
Product Category:	Active components – Discrete components
Contact information:	Contact your local onsemi Sales Office or Ammar.Anuar@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:	12 Aug 2022
PPAP Availability Date:	12 Aug 2022
Additional Reliability Data:	Contact your local onsemi Sales Office or Robert.Baran@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
Description and Purpose:	
This Product Change Notification is intended to increase capacity for onsemi automotive Trench 6 MOSFET 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, Seremban, Malaysia), wafer saw and die attach tooling are being updated to accommodate 300mm wafers. There is no change to the orderable part number. There is no product marking change as a result of this change.	

	Before Change	After Change
Wafer Fabrication Site	onsemi Aizu, Japan	<u>Global Foundries, US</u>
Wafer Diameter	200mm (existing sites)	300mm (Global Foundries)
Wafer Probe Site	onsemi Seremban, Malaysia	<u>Global Foundries, US</u>
Back Grind, Back Metal Site	onsemi ISMF, Malaysia	<u>Global Foundries, US</u>

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
None	Global Foundries East Fishkill, New York, United States

Marking of Parts/ Traceability of Change:	Material will be traceable with onsemi lot trace code & tracking
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Reliability Data Summary:

QV DEVICE NAME :NVMFD5C650NLT1G
RMS: 81525, 84358
PACKAGE: S08FL Dual

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=175°C, 100% max rated V	1008 hrs	0/231
HTGB	JESD22-A108	Ta=175°C, 100% max rated Vgss	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 175°C	1008 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C, Pre IOL, TC, uHAST, HAST for surface mount pkgs only		0/924
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	30K cyc	0/231
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/231
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
SD	JSTD002	Ta = 245°C, 5 sec		0/10

NOTE: AEC-1 pager 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.



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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
NVMFD5C470NLT1G	NA	NVMFD5C650NLT1G
NVMFD5C470NLWFT1G	NA	NVMFD5C650NLT1G
NVMFD5C650NLT1G	NA	NVMFD5C650NLT1G
NVMFD5C680NLT1G	NA	NVMFD5C650NLT1G
NVMFD5C680NLWFT1G	NA	NVMFD5C650NLT1G
NVMFD5C466NLT1G	NA	NVMFD5C650NLT1G
NVMFD5C466NLWFT1G	NA	NVMFD5C650NLT1G