



Final Product/Process Change Notification

Document #: FPCN24425ZB1

Issue Date: 03 Jan 2023

Title of Change:	Update to FPCN24425ZB - To correct the “before and after” change table of previously announced change. Assembly and Final Test Capacity Expansion for Automotive MOSFET S08FL packages at Amkor Technology in Kuala Langat, Malaysia.
Proposed Changed Material First Ship Date:	30 Jun 2023 or earlier if approved by customer
Current Material Last Order Date:	N/A <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:	N/A <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:	15 Jan 2023
PPAP Availability Date:	15 Jan 2023
Additional Reliability Data:	Contact your local onsemi Sales Office or MohdAzizi.Azman@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
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.
Process - Assembly	Move of all or part of assembly to a different location/site/subcontractor., Change of direct material supplier
Description and Purpose:	
<p>This Product Change Notification is an update to FPCN24425ZB to correct the “before and after” change table, which announced that onsemi is expanding its manufacturing operation of its Automotive MOSFET S08FL packaged products to AMKOR Technology located in Kuala Langat, Malaysia.</p> <p>The changes include AMKOR Technolgy as an additional site for assembly and final test, as compared to our existing site, and will also introduce the “-YE” suffix for parts produced in AMKOR.</p>	



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And while the process remain unchanged at both assembly site, the leadframe base material will be using C194 at AMKOR instead of TAMAC4 used at onsemi Seremban.

	Before Change	After Change	
Assembly Site	onsemi Seremban, Malaysia	onsemi Seremban, Malaysia	AMKOR, Malaysia
Final Test Site	onsemi Seremban, Malaysia	onsemi Seremban, Malaysia	AMKOR, Malaysia
Leadframe Base Material	onsemi Seremban - TAMAC4	onsemi Seremban - TAMAC4	AMKOR – C194
Product Marking Change	onsemi Seremban Site Code - R	onsemi Seremban Site Code - R	AMKOR Site Code - YE
Part Number	Current part number	Current part number	Current part number + suffix “-YE”

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	AMKOR, Malaysia

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

QV DEVICE NAME : NVMF55C426NAFT1G
RMS: S86884, S84284, S85405
PACKAGE: SO8FL

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	2016 hrs	0/231
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	30000 cyc	0/231
TC	JESD22-A104	Ta= -55°C to +150°C, mount on board	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
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/924
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90
SD	JSTD002	Ta = 245C, 5 sec		0/45

QV DEVICE NAME : NVMF55C646NLAFT1G

RMS: S84302, S85406

PACKAGE: SO8FL

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	2016 hrs	0/231
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	30000 cyc	0/231
TC	JESD22-A104	Ta= -55°C to +150°C, mount on board	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
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/924
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90
SD	JSTD002	Ta = 245C, 5 sec		0/45

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
NVMF55C673NLAFT1G	NVMF55C673NLAFT1G-YE	NVMF55C646NLAFT1G, NVMF55C426NAFT1G
NVMF55C646NLAFT1G	NVMF55C646NLAFT1G-YE	NVMF55C646NLAFT1G, NVMF55C426NAFT1G
NVMF55C628NLAFT1G	NVMF55C628NLAFT1G-YE	NVMF55C646NLAFT1G, NVMF55C426NAFT1G
NVMF55C430NAFT1G	NVMF55C430NAFT1G-YE	NVMF55C646NLAFT1G, NVMF55C426NAFT1G
NVMF55C426NAFT1G	NVMF55C426NAFT1G-YE	NVMF55C646NLAFT1G, NVMF55C426NAFT1G
NVMF54C05NT1G	NVMF54C305NT1G-YE	NVMF55C646NLAFT1G, NVMF55C426NAFT1G



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NVMFS5C670NLAFT1G	NVMFS5C670NLAFT1G-YE	NVMFS5C646NLAFT1G, NVMFS5C426NAFT1G
NVMFS5C460NLAFT1G	NVMFS5C460NLAFT1G-YE	NVMFS5C646NLAFT1G, NVMFS5C426NAFT1G
NVMFS5C456NLAFT1G	NVMFS5C456NLAFT1G-YE	NVMFS5C646NLAFT1G, NVMFS5C426NAFT1G
NVMFS5C450NAFT1G	NVMFS5C450NAFT1G-YE	NVMFS5C646NLAFT1G, NVMFS5C426NAFT1G
NVMFS5C442NAFT1G	NVMFS5C442NAFT1G-YE	NVMFS5C646NLAFT1G, NVMFS5C426NAFT1G
NVMFS5C442NLAFT1G	NVMFS5C442NLAFT1G-YE	NVMFS5C646NLAFT1G, NVMFS5C426NAFT1G