ON Semiconductor®

Final Product/Process Change Notification

Document #:FPCN22376XF
Issue Date:16 Mar 2020

Title of Change:	Qualification of Amkor Technology Malaysia (ATM) for the Assembly and Test of Trench MOSFET products packaged in SO8FL and Qualification of Wafer Probe and Backside Process (BGBM) at ON Bucheon, Korea.
Proposed First Ship date:	23 Jun 2020 or earlier if approved by customer
Contact Information:	Contact your local ON Semiconductor Sales Office or guokun.yeng@onsemi.com
PCN Samples Contact:	Contact your local ON Semiconductor Sales Office or PCN.samples@onsemi.com Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or MohdAzizi.Azman@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
Marking of Parts/ Traceability of Change:	Product from Amkor Technology Malaysia will be marked with site code YE prior to date code.
Change Category:	Assembly Change, Test Change, Back Grind, Back Metal
Change Sub-Category(s):	Manufacturing Site Addition

Sites Affected:

ON Semiconductor Sites	**External Foundry/Subcon Sites**
None	AMKOR, Malaysia

Description and Purpose:

This Product Change Notice is to announce that ON Semiconductor is implementing 2 changes on this product listed in this PCN.

a) Expanding assembly and test operations of So8FL discrete packaged products, currently built at ON Seremban, Malaysia facility to Amkor Technology Malaysia (ATM). No change on existing OPN. There will be two separate BOMs for ON Seremban, Malaysia and ATM.

	Before Change Description	**After Change Description**
Assembly, Test Site	ON Seremban, Malaysia	ON Seremban, Malaysia, or Amkor Technology Malaysia
LeadFrame	TAMAC 4 FULL HARD Cu	TAMAC 4 FULL HARD Cu, or C194 Cu leadframe with Ag spot
Clip	Existing Contact Area	Larger Contact Area

b) Additional site of wafer probe and backside process (BGBM) for Trench MOSFET technology at ON Bucheon, Korea. Current site of wafer probe and BGBM are located at ON Seremban and ON ISMF, Malaysia.

	Before Change Description	**After Change Description**
Wafer Probe Site	ON Seremban, Malaysia	ON Seremban, Malaysia, or ON Bucheon, Korea
Backside Process Site	ON ISMF, Malaysia	ON ISMF, Malaysia, or ON Bucheon, Korea

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

Upon the expiration of this FPCN or earlier after customer approval, Trench Mosfet devices may be processed at either location.

These products have been qualified to commodity/commercial requirements. These products will continue being Pb-free, Halide free and RoHS compliant.

Device quality and reliability will continue to meet ON Semiconductors high standards.

Reliability Data Summary:

QV DEVICE NAME: NTMFS4931NT1G
RMS : V47070
PACKAGE : SO8FL

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/252
HTGB	JESD22-A108	Ta=150°C, 100% max rated Vgss	1008 hrs	0/252
HTSL	JESD22-A103	Ta= 150C	2016 hrs	0/267
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc	0/252
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/330
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/252
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/252
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/1086
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90

QV DEVICE NAME: NTMFS4931NT1G
RMS : V60140
PACKAGE : SO8FL

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/252
HTGB	JESD22-A108	Ta=150°C, 100% max rated Vgss	1008 hrs	0/252
HTSL	JESD22-A103	Ta= 150C	2016 hrs	0/252
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc	0/252
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/330
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/252
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/252
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/1086
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90

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.***

Part Number	Qualification Vehicle
NTMFS4931NT1G	NTMFS4931NT1G