



Title of Change:	Qualification of Amkor Technology Malaysia (ATM) for the Assembly and Test of Trench MOSFET products packaged in SO8FL and Trench 6 Technology Capacity Expansion by Qualification ON Semiconductor Aizu, Japan.	
Proposed first ship date:	1 May 2019 or earlier after customer approval.	
Contact information:	Contact your local ON Semiconductor Sales Office <GuoKun.Yeng@onsemi.com>	
Samples:	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.	
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <MohdAzizi.Azman@onsemi.com>, <Don.Knudsen@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>	
Change Part Identification:	Product from Amkor Technology Malaysia will be marked with site code YE prior to date code.	
Change Category:	<input checked="" type="checkbox"/> Wafer Fab Change <input checked="" type="checkbox"/> Assembly Change <input checked="" type="checkbox"/> Test Change <input type="checkbox"/> Other _____	
Change Sub-Category(s):	<input checked="" type="checkbox"/> Manufacturing Site Addition <input type="checkbox"/> Material Change <input type="checkbox"/> Datasheet/Product Doc change <input type="checkbox"/> Manufacturing Site Transfer <input type="checkbox"/> Product specific change <input type="checkbox"/> Shipping/Packaging/Marking <input type="checkbox"/> Manufacturing Process Change <input type="checkbox"/> Other: _____	
Sites Affected:	ON Semiconductor Sites: ON Semiconductor Aizu	External Foundry/Subcon Sites: Amkor Malaysia
Description and Purpose: This Product Change Notice is to announce that ON Semiconductor is: a) Expanding assembly and test operations of SO8FL discrete packaged products, currently built at ON Semiconductor Seremban, Malaysia facility to Amkor Technology Malaysia (ATM). b) Qualification of additional wafer fabrication capacity of 30V Trench (T6) MOSFET technology in ON Semiconductor Aizu, located in Japan. There are no product material changes and 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:****Qual Vehicle:** NTMFS4C302NT1G (Amkor qualification)

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 80% 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= 150°C	1008 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	0/252
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 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		0/1008
RSH	JESD22- B106	Ta = 265°C, 10 sec		0/90
SD	JSTD002	Ta = 245°C, 10 sec		0/45

Qual Vehicle: NVMFS4C01NT1G (Aizu qualification)

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 rated Vgss	1008 hrs	0/240
HTSL	JESD22-A103	Ta= 175	1008 hrs	0/240
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15K cyc	0/240
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/240
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/240
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90

Electrical Characteristic 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
NTMFS4C50NT1G	NTMFS4C302NT1G
NTMFS4C59NT1G	NVMFS4C01NT1G