ON Semiconductor®

Final Product/Process Change Notification

Document # : FPCN21745X
Issue Date: 10 November 2017

Title of Change:	Qualification of ON Semiconductor Tarlac Philippines as assembly and test site for ESD Protection Diodes of NSPM1041BMUTBG and NSPM2051MUT5G.
Proposed first ship date:	17 February 2018
Contact information:	Contact your local ON Semiconductor Sales Office or <Mike.Begonia@onsemi.com>
Samples:	Contact your local ON Semiconductor Sales Office
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <Phine.Guevarra@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:	Change marking for identification • Additional vertical line/bar after one digit date code as site identification – **MI**

Device	SBN MARKING	OSPI TARLAC MARKING
NSPM1041BMUTBG	MCM	MC**MI**
NSPM2051MUT5G	M2M	M2**MI**

Change category: ☐ Wafer Fab Change ☒ Assembly Change ☒ Test Change ☐ Other _____

Change Sub-Category(s):
☒ Manufacturing Site Change/Addition
☐ Manufacturing Process Change
☐ Material Change
☐ Product specific change
☐ Datasheet/Product Doc change
☐ Shipping/Packaging/Marking
☐ Other: _____

Sites Affected:	ON Semiconductor Sites: ON Tarlac City, Philippines	External Foundry/Subcon Sites: None

Description and Purpose:

The Final Notification announces to customers the plan to have ON Semiconductor Tarlac Philippines (OSPI) factory as additional production site for NSPM1041BMUTBG and NSPM2051MUT5G, which are currently manufactured at ON semiconductor Seremban (SBN), Malaysia factory.

The Philippines internal facility is certified with ISO/TS 16949:2009 and is currently running production for DFN packages. These products will continue being Pb-free, Halide free and RoHS compliant. Qualification tests are designed to show that the reliability of the qualified devices will continue to meet or exceed ON Semiconductor standards.

NSPM1041BMUTBG

	Before Change (Seremban Build) Description	After Change (Seremban and Tarlac Build) Description
Lead Frame	PPF uDFN20125-2L	No change
Epoxy	AB 8008HT	No change
Mold Compound	MC SU EMEG760	No change
Wire Size/Type	2 mils / PCC	No Change

NSPM2051MUT5G

	Before Change (Seremban Build) Description	After Change (Seremban and Tarlac Build) Description
Lead Frame	PPF uDFN1610-2L	No change
Epoxy	AB 8008HT	No change
Mold Compound	MC SU EMEG770 (SBN)	MC SU EMEG770 (SBN)/ MC SU EMEG760 (TARLAC)
Wire Size/Type	2 mils / PCC	No Change

Reliability Data Summary:

QV DEVICE NAME: NSPM1041BMUTBG
RMS: 41149
PACKAGE: UDFN2 2.0x1.25, 1.3P

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	High Temperature Reverse Bias Tj=150C Bias = 100% Vrwm	1008 hrs	0/77*3
HTSL	JESD22-A103	Ta=150C max storage temp for device	2000 hrs	0/77*3
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=150C max storage temp for device" by "Ta=150C max storage temp for device"	15000 cyc	0/77*3
TC	JESD22-A104	Temp = -65°C to +150°C; for 1000 cycles	1000 cyc	0/77*3
HAST	JESD22-A110	Temp = 130C, 85% RH, ~ 18.8 psig, 100% VRWM for 96hr (JA101)	192 hrs	0/77*3
uHAST	JESD22-A118	Temp = 130C, RH=85%, ~ 18.8 psig	96 hrs	0/77*3
PC	J-STD-020 JESD-A113	IR reflow at 260C		0/480*3
RSH	JESD22- B106	Ta=265C 10 sec dwell B106		0/30*3

QV DEVICE NAME: NSPM2051MUT5G
RMS: 41150
PACKAGE: UDFN2 2.0x1.25, 1.3P

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	High Temperature Reverse Bias Tj=150C Bias = 100% Vrwm	1008 hrs	0/77*3
HTSL	JESD22-A103	Ta=150C max storage temp for device	2000 hrs	0/77*3
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=150C max storage temp for device" by "Ta=150C max storage temp for device"	15000 cyc	0/77*3
TC	JESD22-A104	Temp = -65°C to +150°C; for 1000 cycles	1000 cyc	0/77*3
HAST	JESD22-A110	Temp = 130C, 85% RH, ~ 18.8 psig, 100% VRWM for 96hr (JA101)	192 hrs	0/77*3
uHAST	JESD22-A118	Temp = 130C, RH=85%, ~ 18.8 psig	96 hrs	0/77*3
PC	J-STD-020 JESD-A113	IR reflow at 260C		0/480*3
RSH	JESD22- B106	Ta=265C 10 sec dwell B106		0/30*3

Electrical Characteristic Summary:

Data are available upon request.

List of Affected Parts:

Part Number	Qualification Vehicle
NSPM1041BMUTBG	NSPM1041BMUTBG
NSPM2051MUT5G	NSPM2051MUT5G