



Initial Product/Process Change Notification

Document #: IPCN25506X

Issue Date: 17 May 2023

Title of Change:	Qualification of onsemi ISMF Fab (Malaysia) for Small Signal Transistor housed in SOT723 and SC74 package
Proposed First Ship date:	01 Mar 2024 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or farrah.omar@onsemi.com
PCN Samples Contact:	Contact your local onsemi Sales Office. 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.
Type of Notification:	This is an Initial Product/Process Change Notification (IPCN) sent to customers. An IPCN is an advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan. The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN). This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 90 days prior to implementation of the change. In case of questions, contact < PCN.Support@onsemi.com >
Marking of Parts/ Traceability of Change:	Changed material can be identified by lot code.
Change Category:	Assembly Change, Wafer Fab Change
Change Sub-Category(s):	Material Change

Sites Affected:

onsemi Sites	External Foundry/Subcon Sites
onsemi Leshan, China	None
onsemi, ISMF Malaysia	

Description and Purpose:

This is the Initial Notification by onsemi notifying customers of its plan to qualify small signal bipolar junction transistor devices at onsemi ISMF fab (Malaysia) housed in SC74 and SOT723 package. onsemi ISMF fab has been an existing qualified manufacturing site for onsemi which is certified with ATF16949. onsemi ISMF fab qualification includes of changing top metal from AlSiCu to AlSi + TiW for devices in SC74 package.

In addition to this, onsemi Leshan (China) is making changes to the lead frame plating area from Ag plated to Cu plated as well as changing Au wire to Cu wire for devices in SC74 package.

	From	To
Fab Site	JS Foundry, Japan	onsemi ISMF, Malaysia
Top Metal	SOT723: No change SC74: AlSiCu	SOT723: No change SC74: AlSi + TiW
LeadFrame	SOT723: No change SC74: Ag plated L/F	SOT723: No change SC74: Cu plated L/F
Bond Wire	SOT723: No change SC74: 1.3mil Au wire	SOT723: No change SC74: 1.3mil Cu wire

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



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Qualification Plan:

QV DEVICE NAME : NSV60101DMR6T1G

RMS : 88094

PACKAGE : SC74-6L

Test	Specification	Condition	Interval
High Temperature Reverse Bias	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs
Preconditioning	J-STD-020 JESD-A113	MSL1 @260 °C	-
Intermittent Operating Life	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off =2 min	15,000 cyc
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc
Highly Accelerated Stress Test	JESD22-A110	110°C, 85% RH, 17.7 psia, bias	264 hrs
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec	-

QV DEVICE NAME : NSVMMBT5401M3T5G

RMS : 88095

PACKAGE : SOT723-3L

Test	Specification	Condition	Interval
High Temperature Reverse Bias	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs
Preconditioning	J-STD-020 JESD-A113	MSL1 @260 °C	-
Intermittent Operating Life	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off =2 min	15,000 cyc
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Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec	-

Estimated date for qualification completion: 1 November 2023

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
MMBT5401M3T5G	NSVMMBT5401M3T5G
NSS60101DMR6T1G	NSV60101DMR6T1G