ON Semiconductor

Final Product/Process Change Notification

Document # : FPCN20927ZC
Issue Date: 4 September 2015

Title of Change:	Packing Method Change due to MSL Classification for SSOP 36 EP devices using micro pre-plated leadframes. (MSL 2 to MSL 3)
Proposed first ship date:	4 September 2016 or earlier upon customer approval
Contact information:	Contact your local ON Semiconductor Sales Office or Ryan.Trinidad@onsemi.com or Dennis.Remolacio@onsemi.com
Samples:	Contact your local ON Semiconductor Sales Office
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or Ryan.Trinidad@onsemi.com or Dennis.Remolacio@onsemi.com
Type of notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 12 months prior to implementation of the change or earlier upon customer approval. ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact <PCN.Support@onsemi.com>.
Change Part Identification:	There will be no change to part nomenclature or ordering code. Product implementation will be controlled by date code and material will not ship prior to the PCN effectivity date provided, unless early customer acceptance is provided.
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:

☐ All site(s) ☐ not applicable ☒ ON Semiconductor site(s) : ON Carmona, Philippines ☐ External Foundry/Subcon site(s)

Description and Purpose:

ON Semiconductor is notifying of the intent to change the packaging of SSOP 36-EP devices from MSL 2 to MSL 3. This change will affect all SSOP 36-EP devices that are using leadframe part number N42423E711 and N42423E712 (uPPF leadframe type) which are susceptible to lead discoloration due to tarnishing effect of the leadframe with a silver layer. This will in effect limit the MET (manufacturing exposure time) at customer side from 1 year to 7 days and needed to inspect the units once the 7 days limit is exceeded.

There are no changes to product design, electrical specifications, or physical dimensions as a result of this notification. Full reliability information has been completed and all products will continue to meet or exceed ON Semiconductor reliability standards.

Reliability Data Summary:

Staging evaluation was conducted in order to identify the impact of environment on lead discoloration for uPPF product. Results shows discoloration on units after 2 weeks (Final test cycle time: 7 days) and it is highly recommended to bag the units and limit the manufacturing exposure time at customer.

SSOP36 EVALUATION (STAGE @ Trim and Form)				
Evaluation Done after Trim and Form Process (Temp: 18~27 degC, RH: 35~55%)				
EXPOSURE TIME	BENDING (w/ forming process)		NO BEND (w/out forming Process)	
	Solderability Test	Visual Inspection	Solderability Test	Visual Inspection
No Staging (Control)	PASS	No Discolor	PASS	No Discolor
4 days	PASS	No Discolor	PASS	No Discolor
7 days	PASS	No Discolor	0/10	No Discolor
2 weeks	FAIL - 4/10	With discoloration	FAIL - 3/10	With discoloration
Extra High - 1 month	FAIL - 1/10	With discoloration	FAIL - 6/10	With discoloration
Note: Final Test cyle time is 7 days.				

Electrical Characteristic Summary:

There are no changes in electrical performance. Datasheet specifications are not affected by this change.

List of affected Standard Parts:

NCV7471DQ5R2G
NCV70522DQ004R2G
NCV70627DQ001R2G
NCV7462DQ0R2G
NCV7608DQR2G
NCV78663DQ0R2G
NCV78763DQ0R2G

List of affected Customer Specific Parts:

SCV70521DQ005R2G