ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16727A

Generic Copy

Issue Date: 17-Nov-2011

TITLE: Copper Wire for SOIC and TSSOP packages in Carmona, Philippines

PROPOSED FIRST SHIP DATE: 17-Feb-2012

AFFECTED CHANGE CATEGORY(S): Assembly Process

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your local ON Semiconductor Sales Office or Shannon Riggs<Shannon.Riggs@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office, Shannon Riggs <Shannon.Riggs@onsemi.com>

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or Ken Fergus<Ken.Fergus@onsemi.com>

NOTIFICATION TYPE:

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 90 days prior to implementation of the change.

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 <quality@onsemi.com>.

DESCRIPTION AND PURPOSE:

A General Announcement (GA#16200) was published on 1-29-09 regarding the ongoing Copper Wirebond conversion program at ON Semiconductor. This is a FPCN to notify customers of its plan to qualify Copper Wire (in place of Gold Wire) on SOIC and TSSOP packages assembled at the Carmona, Philippine assembly location. Reliability Qualification and full electrical characterization over temperature has now been completed on the designated package qualification vehicles.

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RELIABILITY DATA SUMMARY:

Reliability Test Results:

#	Test	Name	Test Conditions	End Point Req's	Test Results	(rej/ ss)	(rej/ ss)	(rej/ ss)	(rej/ss)
					Read Point	Lot A	Lot B	Lot C	Control
1	Prep	Sample preparation and initial part testing	Various	---	Initial Electrical	Done	Done	Done	Done
A1	PC	Preconditioning Test (Test@Room/hot) SMD only; Mositure preconditioning for THB/HAST, AC/UHAST, TC; Peak reflow Temp = 260C	MSL 1 260	Test at R and Hot	0/240	0/240	0/240	0/240	0/240
A2	PC -HAST	Preconditioned Highly accelerated stress test	TA= +130°C, RH = 85%, PSIG= 18.8, bias	c = 0, Room, Hot	**96 hours**	0/80	0/80	0/80	0/80
					144 hours	0/78	0/78	0/78	0/78
					192 hours	0/78	0/78	0/78	0/78
A3	PC-TC	Preconditioned Temperature Cycle	-65/+150 C	c = 0, Room, Hot	500	0/80	0/80	0/80	0/80
					1000cyc	0/78	0/80	0/68	0/78
A4	PC-AC	Preconditioned Autoclave/Unbiased HAST	121C/100%RH,15psig	c = 0, Room	**96 hours**	0/80	0/80	0/80	0/80
					192 hours	0/80	0/78	0/78	0/78
					240 hours	0/80	0/78	0/78	0/
A6	HTSL	High Temperature Storage Life	150C at 1008hrs	c = 0, Room, Hot	504 hours	0/80	0/80	0/80	0/80
					1008 hours	0/80	0/80	0/80	0/80
B1	HTOL	High Temp Op Life	TA = 150°C for 1008hrs	c = 0, Room, Hot	504 hours	0/80	0/80	0/80	0/80
					1008 hours	0/80	0/80	0/80	0/80
C3	SD	Solderability (>95% coverage)		10 units per lot	**Pass**	0/10	0/10	0/10	0/10
	RSH	Resistance to solder heat	JESD22 – B106 260°C Immersion	Test at R	**Pass**	0/10	0/10	0/10	0/10

ELECTRICAL CHARACTERISTIC SUMMARY:

There is no electrical characterization difference in products assembled with copper wire. Electrical data is available upon request.

CHANGED PART IDENTIFICATION:

Products affected on this FPCN will have part number date code greater than WW7, 2012.

List of affected General Parts:

MC33172DR2GH
NCV33072DR2G
NCV33074DR2G
NCV33174DTBR2G
NCV833DR2G
SA33072DR2G