ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16727C

Generic Copy

Issue Date: 05-Dec-2012

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

PROPOSED FIRST SHIP DATE: 05-Mar-2013

AFFECTED CHANGE CATEGORY(S): Assembly Process

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

SAMPLES: Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or <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, Philippines assembly location. Reliability Qualification and full electrical characterization over temperature has now been completed on the designated package qualification vehicles.

The device listed in this updated notification was omitted from prior notifications because it was created and released after the original FPCN was released.

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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	0/78
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 can be made available upon request.

CHANGED PART IDENTIFICATION:

The product affected in this FPCN will have a part number date code greater than WW08, 2013.

List of affected General Parts:

NCV431BVDR2G