ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16923

Generic Copy

Issue Date: 25-Oct-2012

TITLE: Phase 1 Copper Wire for VHVIC Products in SOIC and TSSOP packages in Carmona, Philippines

PROPOSED FIRST SHIP DATE: 25-Jan-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, Philippine assembly location for the VHVIC products listed in this announcement.

Reliability Qualification and full electrical characterization over temperature has now been completed on the designated package qualification vehicles.

ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16923

RELIABILITY DATA SUMMARY:

Reliability Test Results:

NCP1200D60R2G

#	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	MSL 1 Preconditioning	MSL1 260C	c=0, Room	Post PC	0/240	0/240	0/240	0/240
A3	PC-TC	Preconditioned Temperature Cycle	-65C/+150C	c=0, Room	500 cycles	0/80	0/80	0/80	0/80
					1000 cycles	0/80	0/80	0/80	0/80
A2	PC-HAST	Precond Highly Accelerated Stress Test	T_A = 130C/85%RH, 18.8psig, with bias	c=0, Room	96 hours	0/80	0/80	0/80	0/80
A4	PC-UHAST	Precond Highly Accelerated Stress Test	T_A = 130C/85%RH, 18.8psig, no bias	c=0, Room	96 hours	0/80	0/80	0/80	0/80
A6	HTSL	High Temperature Storage Life	T_A = 150C	c=0, Room	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	T_A = 150C for 1008hrs with bias	c=0, Room	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 260C Immersion	c=0, Room	Pass	0/10	0/10	0/10	0/10
C4	BPS	Wire Bond Pull Test	Cpk>1.33	5 parts minumum	30 bonds	0/30	0/30	0/30	0/30
C5	WBS	Wire Bond Shear Test	Cpk>1.33	5 parts minumum	30 bonds	0/30	0/30	0/30	0/30

NCP1217D65R2G

#	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	MSL 1 Preconditioning	MSL1 260C	c=0, Room	Post PC	0/240	0/240	0/240	0/240
A3	PC-TC	Preconditioned Temperature Cycle	-65C/+150C	c=0, Room	500 cycles	0/80	0/80	0/80	0/80
					1000 cycles	0/80	0/80	0/80	0/80
A4	PC-AC	Preconditioned Autoclave	T_A = 121C/100%RH, 15psig	c=0, Room	96 hours	0/80	0/80	0/80	0/80
A5	PC-UHAST	Precond Highly Accelerated Stress Test	T_A = 130C/85%RH, 18.8psig, no bias	c=0, Room	96 hours	0/80	0/80	0/80	0/80
A6	HTSL	High Temperature Storage Life	T_A = 150C	c=0, Room	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 260C Immersion	c=0, Room	Pass	0/10	0/10	0/10	0/10
C4	BPS	Wire Bond Pull Test	Cpk>1.33	5 parts minumum	30 bonds	0/30	0/30	0/30	0/30
C5	WBS	Wire Bond Shear Test	Cpk>1.33	5 parts minumum	30 bonds	0/30	0/30	0/30	0/30

ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16923

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 codes greater than WW03 2013.

List of affected General Parts:

MC33363ADWG	NCP1207BDR2G	NCP1338DR2G
MC33363ADWR2G	NCP1216AD100R2G	NCP1351ADR2G
MC33363BDWG	NCP1216AD133R2G	NCP1351BDR2G
MC33363BDWR2G	NCP1216AD65R2G	NCP1351CDR2G
MC33364D1G	NCP1216D100R2G	NCP1351DDR2G
MC33364D1R2G	NCP1216D133R2G	NCP1377BD1R2G
MC33364D2G	NCP1216D65R2G	NCP1377BDR2G
MC33364D2R2G	NCP1217AD100R2G	NCP1377D1R2G
MC33364DG	NCP1217AD133R2G	NCP1377DR2G
MC33364DR2G	NCP1217AD65R2G	NCP1395ADR2G
MC33368DG	NCP1217D100R2G	NCP1395BDR2G
MC33368DR2G	NCP1217D133R2G	NCP1605ADR2G
NCP1200D100R2G	NCP1217D65R2G	NCP1605BDR2G
NCP1200D40R2G	NCP1230D100R2G	NCP1605DR2G
NCP1200D60R2G	NCP1230D133R2G	NCP1650DR2G
NCP1203D100R2G	NCP1230D165R2G	NCP1651DR2G
NCP1203D40R2G	NCP1230D65R2G	NCP1653ADR2G
NCP1203D60R2G	NCP1308DR2G	NCP1653DR2G
NCP1207ADR2G	NCP1337DR2G	NCP5181DR2G

List of affected Customer Specific Parts:

SCY99006AR2G	SCY99008BR2G	SCY99058ADR2G
SCY99006BR2G	SCY99008CR2G	SCY99062D100R2G
SCY99007AR2G	SCY99008DR2G	SCY99062D133R2G
SCY99007BR2G	SCY99008ER2G	SCY99062D65R2G
SCY99007R2G	SCY99008R2G	SCY99063D65R2G
SCY99008AR2G	SCY99056DR2G	SCY99100D100R2G