ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20122

Generic Copy

Issue Date: 04-Jul-2013

TITLE: Capacity expansion for SOIC08 Copper Wire Products into ASE Kunshan, China

PROPOSED FIRST SHIP DATE: 04-Oct-2013

AFFECTED CHANGE CATEGORY(S): Subcontractor Assembly Site, Subcontractor Test Site

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

ON Semiconductor is qualifying additional assembly and test manufacturing capacity for SOIC08 products assembled with copper wire in ASE Kunshan, China (ASEKS). ASEKS is a fully qualified manufacturing facility and is currently qualified for SOIC14 and SOIC16 copper wire assembled products. This is the final PCN providing the details pertinent to the change. This change represents capacity expansion, and upon expiration of the PCN product may be sourced from ASEKS, or any of the previously approved manufacturing locations.

ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20122

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	Lot 2
1	Prep	Sample preparation and initial part testing	Various	---	Initial Electrical	Done	Done	Done	Done
A1	PC	Preconditioning Test (Test@Rm) SMD only; Mositure preconditioning for THB/HAST, AC/UHAST, TC; Peak reflow Temp = 260C	MSL 1 260	Test at R	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	**96 hours**	0/80**	0/80	0/80	0/80
					144 hours	0/77	0/77	0/77	0/77
					192 hours	0/77	0/77	0/77	0/77
A3	PC-TC	Preconditioned Temperature Cycle	-65/+150 C	c = 0, Room	500	0/90**	0/90	0/90	0/90
					1000cyc	0/77	0/77	0/77	0/77
					1500 cyc	0/77	0/77	0/77	0/77
					2000 cyc	0/77	0/77	0/77	0/77
					2500 cyc	0/77	0/77	0/77	0/77
					3000 cyc	0/77	0/77	0/77	0/77
					3500 cyc	0/77	0/77	0/77	0/77
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	0/77	0/77	0/77	0/77
					240 hours	0/77	0/77	0/77	0/77
A6	HTSL	High Temperature Storage Life	150C at 1008hrs	c = 0, Room	504 hours	0/77	0/77	0/77	0/77
					1008 hours	0/77	0/77	0/77	0/77
					1512 hours	0/77	0/77	0/77	0/77
					2016 hours	0/77	0/77	0/77	0/77
B1	HTOL	High Temp Op Life	TA = 150°C for 1008hrs	c = 0, Room	504 hours	0/80**	0/80	0/80	0/80
					1008 hours	0/80	0/80	0/80	0/80
					1512 hours	0/77	0/77	0/77	0/77
					2016 hours	0/77	0/77	0/77	0/77
C1	BS	Wire bond shear Test: (Ppk >1.67 and Cpk >1.33)	AEC-Q100-001	30 bonds coming from 5 units Cpk > 1.33	Post 500cycles TC – passed		30 bonds/ 5units	30 bonds/ 5units	
C2	WBP	Wire bond pull test: (Ppk >1.67 and Cpk >1.33)	Condition C at post 500 cycles	30 bonds coming from 5 units Cpk > 1.33	Post 500cycles TC - passed		30 bonds/ 5 units	30 bonds/ 5units	
C3	SD	Solderability (>95% coverage)		10 units per lot	**Pass**	0/15	0/15	0/15	0/15
	RSH	Resistance to solder heat	JESD22 – B106 260°C Immersion	Test at R	**Pass**	0/40	0/40	0/40	0/40

Table 1: MC1413DR2G reliability stresses and conditions
**obtained samples for DPA

ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20122

ELECTRICAL CHARACTERISTIC SUMMARY:

Product performance continues to meet datasheet specifications.

CHANGED PART IDENTIFICATION:

Upon expiration of this notification devices may be shipped from any qualified manufacturing location. Manufacturing traceability will be maintained to allow identification of the assembly source.

List of affected General Parts:

LM258DG
LM258DR2G
LM2903DG
LM2903DR2G
LM2903VDG
LM2903VDR2G
LM2904DG
LM2904DR2G
LM2904VDG
LM2904VDR2G
LM2931ACDG
LM2931ACDR2G
LM2931AD-5.0G
LM2931AD-5.0R2G
LM2931CDG
LM2931CDR2G
LM2931D-5.0G
LM2931D-5.0R2G
LM293DG
LM293DR2G
LM317LBDG
LM317LBDR2G
LM317LBZG
LM317LBZRAG
LM317LBZRPG
LM317LDG
LM317LDR2G
LM358DG
LM358DR2G
LM393DG
LM393DR2G
MC33262DR2G

MC33269D-012G
MC33269D-3.3G
MC33269D-5.0G
MC33269DG
MC33269DR2-012G
MC33269DR2-3.3G
MC33269DR2-5.0G
MC33269DR2G
MC78L05ABDG
MC78L05ABDR2G
MC78L05ABDR2GH
MC78L05ACDG
MC78L05ACDR2G
MC78L05ACDR2GH
MC78L08ABDG
MC78L08ABDR2G
MC78L08ACDG
MC78L08ACDR2G
MC78L09ABDG
MC78L09ABDR2G
MC78L09ACDG
MC78L09ACDR2G
MC78L12ABDG
MC78L12ABDR2G
MC78L12ACDG
MC78L12ACDR2G
MC78L15ABDG
MC78L15ABDR2G
MC78L15ACDG
MC78L15ACDR2G
MC79L05ABDG
MC79L05ABDR2G
MC79L05ACDG
MC79L05ACDR2G
MC79L12ABDG
MC79L12ABDR2G
MC79L12ACDG
MC79L12ACDR2G
MC79L15ABDG
MC79L15ABDR2G
MC79L15ACDG
MC79L15ACDR2G
UC2842BD1G
UC2842BD1R2G

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20122

UC2843BD1G
UC2843BD1R2G
UC2844BD1R2G
UC2845BD1G
UC2845BD1R2G
UC3842BD1G
UC3842BD1R2G
UC3843BD1G
UC3843BD1R2G
UC3843BVD1G
UC3843BVD1R2G
UC3844BD1G
UC3844BD1R2G
UC3845BD1G
UC3845BD1R2G
UC3845BVD1G
UC3845BVD1R2G