



INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION # 20289

Generic Copy

Issue Date: 04-Dec-2013

TITLE: Qualify ATP as alternate source for SOIC 8lds using Cu wire for ONC35EE wafer technology.

PROPOSED FIRST SHIP DATE: 04-Apr-2014

AFFECTED CHANGE CATEGORY(S): Assembly bill of materials such as epoxy, gold wire and mold compound.

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office or <Joh.Villanueva@onsemi.com>

NOTIFICATION TYPE:

Initial Product/Process Change Notification (IPCN)

First change notification sent to customers. IPCNs are issued at least 120 days prior to implementation of the change. An IPCN is advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan.

The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN).

This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 90 days prior to implementation of the change.

DESCRIPTION AND PURPOSE:

Qualify Amkor Philippines Plant 1 as alternate assembly source using Cu wire for SOIC 8L ONC35EE wafer technology. Purpose of this is to have alternate assembly subcon using Cu wire instead of existing of Au wire. Details of bill of materials as follows:

	Existing				Additional
	OSPI	SMC	UTAC	Vigilant	Amkor
FRAME	LF NI-PD-AU PPF CU 60X60	LF 8LSOIC 60X60 NIPDAU	LF 8LSOIC 80X80 NIPDAU	8LSOIC 80X80 NIPDAU	54 X 48 RU PPF
EPOXY	EPOXYSUMITOMO CRM-1076WB	ABLESTIK 2200D	ABLESTICK 8200T	ABLEBOND 2200D	8290
WIRE	WIRE AU .00080 +/-0.00003	AU .0008 +/-0.00003	AU .0008 +/-0.00003	AU .0008 +/-0.00003	0.8 MIL CU WIRE PD COATED MKE
MOLD	EME G600 (13X2.8)	EME G600	EME G600	EME G600	G700K



INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION #20289

QUALIFICATION PLAN:

Estimated Date for Qualification Completion: Dec /23/2013
 Samples should be available after completion of Qualification.

	Test	Name	Test conditions	Qual Read point
1	Prep	Sample preparation and initial part testing	various	
2	Initial Electrical	Initial Electrical Prior To PC		Initial Elect. PriorTo PC
3	EDR/HTDR	NVM Endurance & High Temperature Data Retention	Grade 1: +150°C, 1008 Hrs	1008 Hrs
4	HTOL	High Temp Operating Life	Tj=125C JA108	1008 Hours
5	PC	MSL1, 2 or 3 Preconditioning	J STD 020A , JA 113 IR reflow at 260°C, H3TRB/HAST, TC, IOL, AC	
6	TC+PC	Temp Cycling+ preconditioning	Temp = -65°C to +150°C; for 1000 cycles (JA104B)	500 cyc
7	HAST	Highly Accelerated Stress Test	Temp = +130°C; RH = 85%, psig ~28 with bias** for 96hr (JA110)	96 Hrs
8	THB+PC	High Humidity High Temp Rev Bias+ preconditioning	Temp = +85°C; RH = 85%, 80% rated Volt** for 1008hr (JA101)	1008 Hrs
9	UHAST+PC	UHAST+preconditioning	Temp = +130°C; RH = 85%, psig ~28 with bias** for 96hr (JA110)	96 Hrs
10	HTSL	High Temp Storage Life	Ta=150C	1008 Hrs
11	RSH	Resistance to Solder Heat	TS=260C, Tdwell=10 sec. Test after RSH. SMD devices are fully submerged during test. (Jedec B-106)	Post RSH elec measure
12	DPA	DeProcessing Analysis	Post PC-Hast , post PC-TC	
13	CDPA	Custom Deprocessing Analysis	Note 13	
14	SAT	Scanning Acoustic Topography	Note 14	
15	TR	Thermal Resistance	Provide thermal comparison data to ensure spec compliance	
16	Yield	Wirebond Related Yield Analysis	per assembly MRB procedure	
17	BPS	Bond Pull Strength	per assembly spec	
18	BS	Ball shear	per assembly spec	
19	PMD	Pad Metal Displacement	12MON49370E	
20	UPD	Under Pad Damage	12MON49370E	

Note:

13: CDPA requires SEM of wire neck and post bond. Inspect for UPD under pad damage (pad metal removed and pad inspected for cracks in the underlayer structures) on 5 units. Perform WP wire pull at post TC (30wire/5 units). Wire condition and pad condition prior to wire pull should be noted (from post TC) ref 12MPO09149A. Inspect for IMC intermetallic corrosion for post HTSL units (pull units from post stress HTSL and have Fa look for intermetallic corrosion)



INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION #20289

List of affected General Parts:

CAT24C08WI-G
CAT24C16WI-GT3
CAT24C04WI-GT3
CAT24C08WI-GT3
CAT25040VI-GT3
CAT24C02WI-GT3
CAT24C02WI-G
CAT24C02WI-GT3A
CAT25010VI-GT3
CAT25160VI-GT3
CAT24C02WE-GT3A
CAT24C02WI-GA
CAT24C04WI-G
CAT24C16WI-G
CAT25010VI-G
CAT25040VI-G
CAT25160VI-G
CAT24C02WE-GT3
CAT24C04WE-GT3
CAT24C08WE-GT3
CAT24C16WE-GT3
CAT25010VE-G
CAT25040VE-G
CAT25080VE-GT3
CAT25160VE-GT3
CAT24C04WE-G
CAT24C08WE-G
CAT25080VE-G
CAT24C02WE-G
CAT25010VE-GT3
CAT25160VE-G