



INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION #20415

Generic Copy

Issue Date: 05-Apr-2014

TITLE: LQFP/ TQFP/ TQFP EP transfer to Amkor Philippines (P1) due to Amkor Korea (K1) Closure

PROPOSED FIRST SHIP DATE: between 1/1/2015 and 4/1/2015, depending on body size. More accurate date will be referenced in FPCN

AFFECTED CHANGE CATEGORY(S): Product/Package Transfer to an existing Mfg site WITH qualified technology

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office

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:

Amkor is closing the Korea K1 Plant per type of package according to the following plan. Assembly manufacturing operations for all Leadframe products now assembled in K1 will need to move to Philippines, P1 Plant.

Package	Body size	FPCN Release (forecast)	ATK Shutdown date
LQFP	10x10	14wk34	14wk44
	12x12	14wk48	14wk52
	24x24	15wk01	14wk52
	28x28	14wk48	14wk14
	7x7	14wk34	15wk10
LQFP-EP	28x28	14wk48	14wk14
TQFP	10x10	14wk34	14wk44
	12x12	14wk48	14wk52
	7x7	14wk34	15wk10
TQFP-EP	10x10	14wk34	14wk44



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K1 bill of materials and process will be supported in P1 with the exception of the following item:

- Lasermark process will be done after lead plating/ post plate bake for matte tin lead finish and trim process for NiPdAu lead finish.

Summarize on the table below are the packages for transfer and its equivalent bill of materials:

BOM for Matte tin Lead Finish	ATK1			ATP1			Remarks
	7x7 10x10	12x12 24x24	28x28	7x7 10x10	12x12 24x24	28x28	
Body Size	VHDLF	HDLF	OMLF	VHDLF	HDLF	OMLF	No Change
Leadframe	3230	3230	3230	3230	3230	3230	No Change
Epoxy	G700L	G700L	G700L	G700L	G700L	G700L	No Change
Mold compound							

BOM for NiPdAu Lead Finish	ATK1			ATP1			Remarks
	7x7 10x10	12x12 24x24	28x28	7x7 10x10	12x12 24x24	28x28	
Body Size	VHDLF	HDLF	OMLF	VHDLF	HDLF	OMLF	No Change
Leadframe	8200C	8200C	8200C	8200C	8200C	8200C	No Change
Epoxy	GE7470LQ	GE7470LQ	GE7470LQ	GE7470LQ	GE7470LQ	GE7470LQ	No Change
Mold compound							



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QUALIFICATION PLAN:

The qualification is performed per type of package.

The principle of similarity will be applied: 1 qualification on 1 representative product will serve for all products qualified.

The first qualification results will be available from August 2014 onwards

Samples should be available after completion of Qualification at FPCN release.

TEST	CONDITIONS	CHECKPOINTS
Moisture Preconditioning <ul style="list-style-type: none"> • Bake • Humidity Soak • Reflow 	125°C 30°C / 60% RH 260°C	24 hrs 192 hrs 3 cycles
Scanning Acoustic Microscopy	J-STD-020	Pre and Post MSL
Temperature Cycling (TC)	- 65°C to 150°C	500 cycles
High Temperature Storage (HTS)	150°	500, 1000 hrs
Preconditioning TC	- 55°C to 125°C	100 cycles
Unbiased Highly Accelerated Stress Test (UHAST)	130°C / 85% RH or 110°C / 85% RH	96 hrs 264 hrs
Physical Dimensions (PD)	JESD22-B100 JESD22-B108	Standard
Wire Bond Pull (WBP)	MIL- STD883 Method 2011 Cond. C or D. Minimum pull strength after temperature cycle = 3 grams	Standard
Wire Bond Shear (WBS)	AEC-Q100-001	Standard
Solderability (SD)	JESD22-B102	Standard
X-Ray	Mil STD 883 D meth 2012 & Mil STD 883 D meth 2030	Standard

List of affected General Parts:

A5191HRTLГ-XTD

ADM1026JSTZ-REEL

LC898201TA-NH

A5191HRTLГ-XTP

AMIS-49200-XTD

LV8747TA-2H

LC87F5864CUTG2H

LV8747TA-NH