November 23, 2015

Subject: PCN#03A-15 – Alternate Qualified Foundry / Mask Set and Alternate Qualified Material Sets for Platform Manager Products

Dear Lattice Customers,

Lattice is providing this 90-day Notification of our intent to utilize an Alternate Qualified Foundry / Alternate Qualified Mask Sets for the FPGA and Power Management sections of the Platform Manager products. In addition, it is our intent to use an alternate qualified mold compound for the 128-pin TQFP Package (LPTM10-1247-3TG128C/I).

Change Description

Each Platform Manager device contains 2 dice: 1) ispPAC-POWR®1220AT8 and 2) MachXO™LCMXO640. This PCN covers changes to both these dice.

The following table summarizes all the material set changes (highlighted in yellow) associated with this PCN.

Current/ New	**Databook Name**	**Date Code**	**Foundry**		**Mold Compound**
			ispPAC-POWR1220AT8	**LCMXO640C**	
Current	LPTM10-12107-3FTG208C/I	A	UMC	FUJITSU 200mm Wafers	Kyocera KE-G2250LKDS
	LPTM10-1247-3TG128C/I				Hitachi CEL-9510HFL-U
New	LPTM10-12107-3FTG208C/I	B	SEIKO EPSON	FUJITSU 300mm Wafers	No change
	LPTM10-1247-3TG128C/I				Sumitomo EME-G631SH

The Seiko Epson built alternate mask of the ispPAC-POWR1220AT8 device has already been communicated through the PCN#01A-12 dated Jan 23, 2012. The die from UMC and the die from Seiko Epson are form, fit and function compatible.

The alternate foundry mask change of the LCMXO640C has already been communicated via PCN#05A-14 dated June 9, 2014. The change from the Fujitsu 200mm wafer foundry to the Fujitsu 300mm wafer foundry are form, fit and function compatible.

The mold compound for the LPTM10-1247-3TG128C/I (128-pin TQFP package) will change from the Hitachi CEL-9510HFL-U to Sumitomo EME-G631SH. The Sumitimo EME-G631SH mold compound is currently used in high volume Lattice TQFP devices. This change will not impact the device form, fit or function.

Affected Products

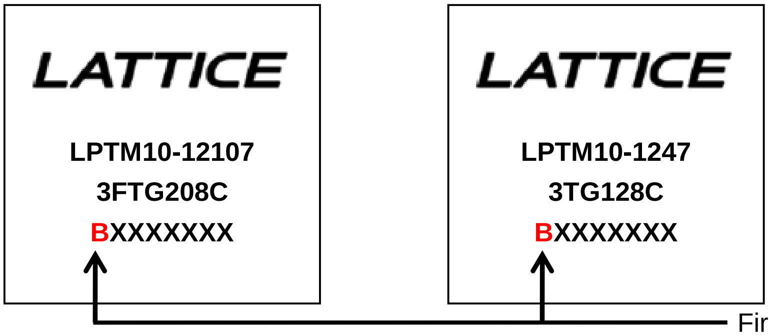
The Ordering Part Numbers (OPNs) affected by this PCN are listed below:

#	Ordering Part Number	Package
1	LPTM10-12107-3FTG208C	208-ball ftBGA
2	LPTM10-12107-3FTG208I	208-ball ftBGA
3	LPTM10-1247-3TG128C	128-pin TQFP
4	LPTM10-1247-3TG128I	128-pin TQFP

This PCN also affects any custom devices (i.e. factory programmed, special test, tape and reel, non-standard speed grade and package, etc.), which are derived from any of the devices listed in the table.

Device Identification

Devices with this new alternate qualified mask set can be identified by the first alpha character of the Inspection Lot Number ("**B**" for the 300mm fab manufactured product), which is marked on the topside of the device. Inspection lot numbers are also marked on the label on the outside of the inventory box as well as on the anti-static moisture barrier bag within. See device topside marking examples below:



First alpha of the Inspection Lot Number

Data Sheet Specifications

This PCN has no impact on any data sheet performance specifications.

Qualification Data

Qualification reliability testing for both Platform Manager devices has been completed. A summary of the qualification data is available here.

Characterization Data

A device characterization report is available here.

Sample Support

Conversion timing for this PCN is 90 days from the date of this Notice. No action is required (meaning no changes to OPNs, your internal Bills of Material, backlog or orders) unless you plan to do further evaluation. Should samples be required to complete evaluation of this PCN, such sample requests must be received no later than December 23, 2015 (30 days after the date of this Notice). Samples for this PCN will use the “**PMB**” suffix appended to the standard OPNs as shown in the example below:

Example:
Standard OPN: LPTM10-12107-3FTG208C
New Material Set Device Sample OPN: LPTM10-12107-3FTG208CPMB

New material set Platform Manager device samples are available for immediate shipment. Customers will have 90 days to evaluate this PCN from receipt of samples.

Conversion Timing Summary

- **Sample Request Cut-off Date: December 23, 2015**
- **PCN Expiration Date: February 23, 2016**

Response

In accordance with JESD46-D, this change is deemed accepted by the customer if no acknowledgement is received within 30 days from this Notice. Lattice PCNs are available on the Lattice PCN web page. Please sign up to receive e-mail PCN alerts by registering here. If you already have a Lattice web account and wish to receive PCN alerts, you can do so by logging into your account and making edits to your subscription options.

Contact

If you have any questions or require additional information, please contact pcn@latticesemi.com.

Sincerely,
Lattice Semiconductor PCN Administration

Appendix A: Material set comparison

			CURRENT QUALIFIED MATERIAL SET				
Assembly Site	**Device**	**Package Type**	**Die Attach**	**Mold Compound**	**Bond Wire**	**Plating/ Solder Balls**	**Leadframe**
ASE Taiwan (Kaohsiung) - ASET	LPTM10-12107	208-ball ftBGA	Henkel (Ablebond) 2100A	Kyocera KE-G2250LKDS	Au (2N)	SAC305	n/a
	LPTM10-1247	128-pin TQFP	Hitachi FH-900 (tape)	Hitachi CEL-9510HFL-U	Au (2N)	Matte Sn	C7025
			ALTERNATE QUALIFIED MATERIAL SET				
	Device	**Package Type**	**Die Attach**	**Mold Compound**	**Bond Wire**	**Plating/ Solder Balls**	**Leadframe**
	LPTM10-12107	208-ball ftBGA	NO CHANGE				
	LPTM10-1247	128-pin TQFP	Hitachi FH-900 (tape)	Sumitomo EME-G631SH	Au (2N)	Matte Sn	C7025