



July 2, 2018

Subject: PCN# 04A-18 Notification of Intent to Utilize an Alternate Qualified Assembly and Test Site for Select Flip Chip Ball Grid Array Devices

Dear Lattice Customers,

Lattice Semiconductor is providing this 90-day notification of an alternate qualified assembly and test site for MachXO3™, iCE5™, and LIF-UC™ family devices in flip chip ball grid array (BGA) packages.

Change Description

The backend assembly and test of MachXO3, iCE5 and LIF-UC family devices in the flip chip BGA package is to be transferred from the Amkor Philippines (ATP) site to the Amkor Korea (ATK) site. ATP will discontinue the flip chip BGA backend assembly by the end of 2018, and has advised current customers to qualify affected devices at the ATK site. The change in material set (see Appendix A) associated with this transfer aligns with Lattice's ECP5-85 MG285 flip chip product already qualified and in production at ATK.

Devices assembled at ATK are identified by the character "A" in the 5th position of the topmarked lot number:



Effects to Customer Design

None

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Affected Products

The Ordering Part Numbers (OPNs) affected by this PCN are listed in Appendix B.

This PCN also affects any custom devices (i.e. factory programmed, special test, non-standard speed grade, etc.), which are derived from these devices.

Data Sheet Specifications

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

Qualification Data

The flip chip packages at ATK are qualified by extension from the existing ECP5-85 MG285 package. The Lattice ECP5-85 MG285 package is the largest die in the largest flip-chip package. The MachXO3, iCE5 and LIF-UC are smaller die in smaller packages.

The ECP5 Qualification Summary includes the package qualification results and may be accessed [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 August 2, 2018 (30 days after the date of this Notice). Samples for this PCN will use the “**AMU**” suffix appended to the standard OPNs as shown in the example below:

Example:

Standard OPN: LCMXO3L-1300E-5MG121C

ATK Sample OPN: LCMXO3L-1300E-5MG121CAMU

Customers will have 90 days to evaluate this PCN from receipt of samples.

Recommended Actions

Current MachXO3, iCE5 and LIF-UC flip chip BGA package customers may place a last time buy from the current assembly site (ATP) for their 2018 requirements. All last time buy orders for ATP-built product must be received by October 1, 2018.

Customers who have further questions regarding this specification change are encouraged to contact local field support or sales@latticesemi.com.

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PCN Timing

Conversion timing for this PCN is 90 days from the date of this Notice. All last time buy orders for ATP-built product must be received by October 1, 2018.

Response

In accordance with J-STD-046, 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 website](#). 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.

Sincerely,

Lattice PCN Administrator

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Appendix A – Material Set

Assembly Material	FROM, Amkor Philippines (ATP)	TO, Amkor Korea (ATK)
Mold Compound	Hitachi GE-110BH83-FC	Sumitomo EME-G311SQ Type B
Solder Balls	MXO3-1300/2100/4300/6900: SAC305 MXO3-9400: LF35 (Sn, 1.2Ag, 0.5Cu, 0.05Ni) ICE5LP4K: LF35 LIF-UC: LF35	MXO3-1300/2100/4300/6900: SAC305 MXO3-9400: LF35 ICE5LP4K: LF35 LIF-UC: LF35

Appendix B – Affected Devices

ICE5LP1K-CM361TR	LCMXO3L-4300E-6MG256C	LCMXO3LF-2100E-6MG256I
ICE5LP1K-CM361TR1K	LCMXO3L-4300E-6MG256I	LCMXO3LF-2100E-6MG324C
ICE5LP1K-CM361TR50	LCMXO3L-4300E-6MG324C	LCMXO3LF-2100E-6MG324I
ICE5LP2K-CM361TR	LCMXO3L-4300E-6MG324I	LCMXO3LF-4300E-5MG121C
ICE5LP2K-CM361TR1K	LCMXO3L-640E-5MG121C	LCMXO3LF-4300E-5MG121I
ICE5LP2K-CM361TR50	LCMXO3L-640E-5MG121I	LCMXO3LF-4300E-5MG256C
ICE5LP4K-CM361TR	LCMXO3L-640E-6MG121C	LCMXO3LF-4300E-5MG256I
ICE5LP4K-CM361TR1K	LCMXO3L-640E-6MG121I	LCMXO3LF-4300E-5MG324C
ICE5LP4K-CM361TR50	LCMXO3L-6900E-5MG256C	LCMXO3LF-4300E-5MG324I
LCMXO3L-1300E-5MG121C	LCMXO3L-6900E-5MG256I	LCMXO3LF-4300E-6MG121C
LCMXO3L-1300E-5MG121I	LCMXO3L-6900E-5MG324C	LCMXO3LF-4300E-6MG121I
LCMXO3L-1300E-5MG256C	LCMXO3L-6900E-5MG324I	LCMXO3LF-4300E-6MG256C
LCMXO3L-1300E-5MG256I	LCMXO3L-6900E-6MG256C	LCMXO3LF-4300E-6MG256I
LCMXO3L-1300E-6MG121C	LCMXO3L-6900E-6MG256I	LCMXO3LF-4300E-6MG324C
LCMXO3L-1300E-6MG121I	LCMXO3L-6900E-6MG324C	LCMXO3LF-4300E-6MG324I
LCMXO3L-1300E-6MG256C	LCMXO3L-6900E-6MG324I	LCMXO3LF-640E-5MG121C
LCMXO3L-1300E-6MG256I	LCMXO3L-9400E-5MG256C	LCMXO3LF-640E-5MG121I
LCMXO3L-2100E-5MG121C	LCMXO3L-9400E-5MG256I	LCMXO3LF-640E-6MG121C
LCMXO3L-2100E-5MG121I	LCMXO3L-9400E-6MG256C	LCMXO3LF-640E-6MG121I
LCMXO3L-2100E-5MG256C	LCMXO3L-9400E-6MG256I	LCMXO3LF-6900E-5MG256C
LCMXO3L-2100E-5MG256I	LCMXO3LF-1300E-5MG121C	LCMXO3LF-6900E-5MG256I
LCMXO3L-2100E-5MG324C	LCMXO3LF-1300E-5MG121I	LCMXO3LF-6900E-5MG324C
LCMXO3L-2100E-5MG324I	LCMXO3LF-1300E-5MG256C	LCMXO3LF-6900E-5MG324I
LCMXO3L-2100E-6MG121C	LCMXO3LF-1300E-5MG256I	LCMXO3LF-6900E-6MG256C
LCMXO3L-2100E-6MG121I	LCMXO3LF-1300E-6MG121C	LCMXO3LF-6900E-6MG256I
LCMXO3L-2100E-6MG256C	LCMXO3LF-1300E-6MG121I	LCMXO3LF-6900E-6MG324C
LCMXO3L-2100E-6MG256I	LCMXO3LF-1300E-6MG256C	LCMXO3LF-6900E-6MG324I
LCMXO3L-2100E-6MG324C	LCMXO3LF-1300E-6MG256I	LCMXO3LF-9400E-5MG256C
LCMXO3L-2100E-6MG324I	LCMXO3LF-2100E-5MG121C	LCMXO3LF-9400E-5MG256I
LCMXO3L-4300E-5MG121C	LCMXO3LF-2100E-5MG121I	LCMXO3LF-9400E-6MG256C
LCMXO3L-4300E-5MG121I	LCMXO3LF-2100E-5MG256C	LCMXO3LF-9400E-6MG256I
LCMXO3L-4300E-5MG256C	LCMXO3LF-2100E-5MG256I	LIF-UC120-CM361TR
LCMXO3L-4300E-5MG256I	LCMXO3LF-2100E-5MG324C	LIF-UC120-CM361TR1K
LCMXO3L-4300E-5MG324C	LCMXO3LF-2100E-5MG324I	LIF-UC120-CM361TR5
LCMXO3L-4300E-5MG324I	LCMXO3LF-2100E-6MG121C	
LCMXO3L-4300E-6MG121C	LCMXO3LF-2100E-6MG121I	
LCMXO3L-4300E-6MG121I	LCMXO3LF-2100E-6MG256C	