March 19, 2012

Subject: PCN# 07A-12 Notification of Intent to Utilize an Alternate Qualified Mask Set for the Lattice MachXO2 256ZE Devices

Dear Lattice Customer,

Lattice is providing this notification of our intent to utilize an alternate qualified mask set for the MachXO2™ 256ZE devices.

CHANGE DESCRIPTION

The current version of the MachXO2 256ZE (Die Code "A") meets Human Body Model (HBM) ESD Class 1B (500V to < 1000V) as defined in the combined ANSI/ESDA/JESD Standard JS-001-2011 (formerly JESD22-A114F). Lattice will now utilize an alternate qualified mask set (Die Code "B") which enhances the ESD protection on the supply pins to meet Class 2 (2000V to < 4000V) HBM as defined in the same JEDEC standard. Specifically, this change improves the power to power HBM ESD between V_{CC} and V_{CCIO} pins. All other supply, control and GPIO pins already met Class 2 ESD performance and are unaffected by this change. This is illustrated in the table below.

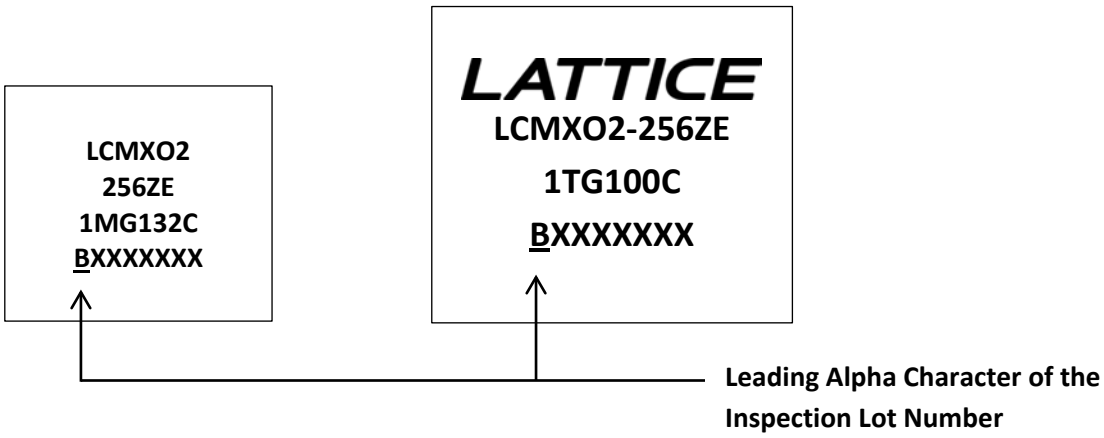
Die Code Revision	Pin Type	HBM ESD Voltage Range (V)	JS-001-2011 Classification
A	Power Supply	500V to <1000V	1B
	Control	2000V to <4000V	2
	GPIO	2000V to <4000V	2
B	Power Supply	2000V to <4000V	2
	Control	2000V to <4000V	2
	GPIO	2000V to <4000V	2

This mask change is specific to the MachXO2 256ZE devices across all packages. No other member of the MachXO2 family is affected by this PCN.

AFFECTED DEVICES

The affected devices are listed in Exhibit "A" (also available in an Excel spreadsheet here). This PCN also affects any custom devices (i.e. factory programmed, special test, etc,) which are derived from any of the affected devices. The OPNs remain unchanged for all affected devices.

DEVICE IDENTIFICATION (EXAMPLE)



The new mask revision can be identified by the leading alpha character "B" of the Inspection Lot Number, which is marked on the topside of the device. The Inspection Lot Number is also marked on the label ("Mark Code" field) on the outside of the inventory box, as well as on the anti-static bag within.

QUALIFICATION DATA

Reliability testing for the qualification of the new MachXO2 256ZE mask set is complete. Qualification data pertinent to this PCN can be can be found in the "MachXO2 Product Family Qualification Summary" report available here. The Revision History (Section 8.0) on the last page of the report highlights the location of the qualification data related to this PCN.

DATA SHEET SPECIFICATIONS

The new mask revision meets all MachXO2 family datasheet specifications and is backward compatible in all applications.

CONVERSION TIMING

Customers are requested to convert to the new mask set no later than June 18th, 2012 (90 days from the date of this notice). Should samples be required to complete evaluation of the new mask set, such requests must be received no later than April 19th, 2012 (30 days after the date of this notice).

CONVERSION TIMING – SUMMARY

- Sample Request Cut-off Date: April 19th, 2012
- Conversion Date: June 18th, 2012

RESPONSE

In accordance with JESD46C and JESD48B, this change is deemed accepted by the customer if no acknolwledgment 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.

CONTACT

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

Sincerely,

Lattice Semiconductor PCN Administration

EXHIBIT "A" – AFFECTED DEVICES

Device	Package	Ordering Part Number
MachXO2-256ZE	100-TQFP	LCMXO2-256ZE-1TG100C
		LCMXO2-256ZE-2TG100C
		LCMXO2-256ZE-3TG100C
		LCMXO2-256ZE-1TG100I
		LCMXO2-256ZE-2TG100I
		LCMXO2-256ZE-3TG100I
	132-csBGA	LCMXO2-256ZE-1MG132C
		LCMXO2-256ZE-2MG132C
		LCMXO2-256ZE-3MG132C
		LCMXO2-256ZE-1MG132I
		LCMXO2-256ZE-2MG132I
		LCMXO2-256ZE-3MG132I
	64-ucBGA	LCMXO2-256ZE-1UMG64C
		LCMXO2-256ZE-2UMG64C
		LCMXO2-256ZE-3UMG64C
		LCMXO2-256ZE-1UMG64I
		LCMXO2-256ZE-2UMG64I
		LCMXO2-256ZE-3UMG64I

Note: 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 above.