



May 14, 2012

**Subject: PCN# 09A-12 Notification of Intent to Utilize Alternate Qualified Material Sets and/or Alternate Qualified Assembly Sites for Select Lattice Product Families**

Dear Lattice Customers:

Lattice is providing this Notification of our intent to utilize alternate qualified material sets and/or alternate qualified assembly sites for select devices and packages. For these devices and packages, there are three primary components to the material set changes being made:

- 1) Alternate bond wire (Copper)
- 2) Alternate mold compounds
- 3) Alternate die attach epoxies (as applicable)

As worldwide assembly capacity converts to copper wire (Cu-wire), Lattice will adopt this technology to ensure sufficient manufacturing capacity. Cu-wire Bills of Material (BOMs) will be qualified at Advanced Semiconductor Engineering Malaysia (ASEM), Advanced Semiconductor Engineering Kaohsiung, Taiwan (ASET) and United Test and Assembly Center, Dong Guan, China (UTACDG).

The initial release of this PCN will cover material set changes at ASEM only. Subsequent revisions of this PCN will cover material set and/or assembly site changes at ASEM, ASET and UTACDG (refer to Exhibit "A" for projected PCN schedule). These suppliers utilize industry standard raw materials, assembly and test processes. The use of these Alternate Qualified Material Sets will not change external package dimensions. The package footprints remain the same and are published on the [Lattice website](#).

This PCN has the additional benefit of minimizing potential supply interruptions by establishing manufacturing capabilities in multiple geographies.

**Affected Devices**

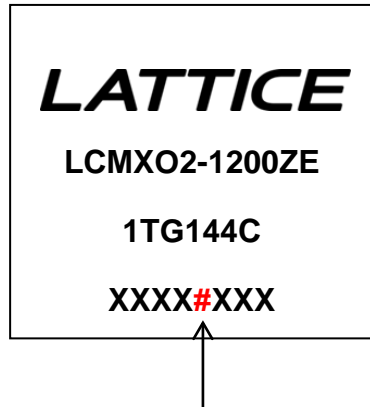
The Ordering Part Numbers (OPNs) affected by this PCN are listed in an Excel spreadsheet [here](#). This PCN also affects any custom devices (i.e. factory programmed, special test, tape & reel, etc.), which are derived from any of the devices listed.

**Material Set Changes**

Please refer to the Excel spreadsheet [here](#) for details of material set changes associated with this PCN.

## Device Identification

Devices with Cu-wire material sets can be identified by a numeric value in the fifth position of the datecode marked on the topside of the devices. An alpha character in the fifth position indicates a gold bond wire (Au-wire) material set. This datecode is 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 example below.



Numeric Character in fifth position of Datecode indicates Cu-wire material set  
Alpha Character in fifth position of Datecode indicates Au-wire material set

## Data Sheet Specifications

This PCN has no impact on any data sheet specifications.

## Qualification Data

Qualification data pertinent to this PCN can be found in the document available [here](#).

## Characterization Data

A device characterization report is available [here](#).

## Frequently Asked Questions

Lattice recommends that customers refer to the FAQ document available [here](#) to find answers to commonly asked questions regarding this PCN.

## Conversion Timeline

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 June 13, 2012** (30 days after the date of this Notice). Samples for this PCN revision (ASEM) will use the "CU1" suffix appended to the standard OPN as shown in the example below.

### Example:

Standard OPN: LCMXO2-1200ZE-1TG144C

Cu-wire OPN: LCMXO2-1200ZE-1TG144CCU1

### Conversion Timing Summary

- **Sample Request Cut-off Date: June 13, 2012**
- **PCN Expiration Date: August 12, 2012**

### Backlog

Lattice recommends that customers complete their evaluation before the PCN Expiration Date (August 12, 2012). Lattice will begin shipping the Cu-wire material sets as early as August 12, 2012. **Any customer who does not want to receive Cu-wire devices beyond the PCN Expiration Date must initiate a change order request to convert their backlog to the Au-wire custom OPN.** The custom OPN for the Au-wire material sets will use the three character suffix "AU1" appended to the standard OPN as shown in the example below. After the customer completes evaluation of the Cu-wire material set, any backlog with the "AU1" custom OPNs must be converted back to the standard OPN.

#### Example:

Standard OPN: LCMXO2-1200ZE-1TG144C

Au-wire OPN: LCMXO2-1200ZE-1TG144CAU1

If customers want to restrict their existing custom OPNs to Au-wire material sets, they must initiate a request for a new custom OPN that will replace their existing custom OPN. After the customer completes evaluation of the Cu-wire material set, any backlog with the new custom OPNs must be converted back to the original custom OPN.

### Response

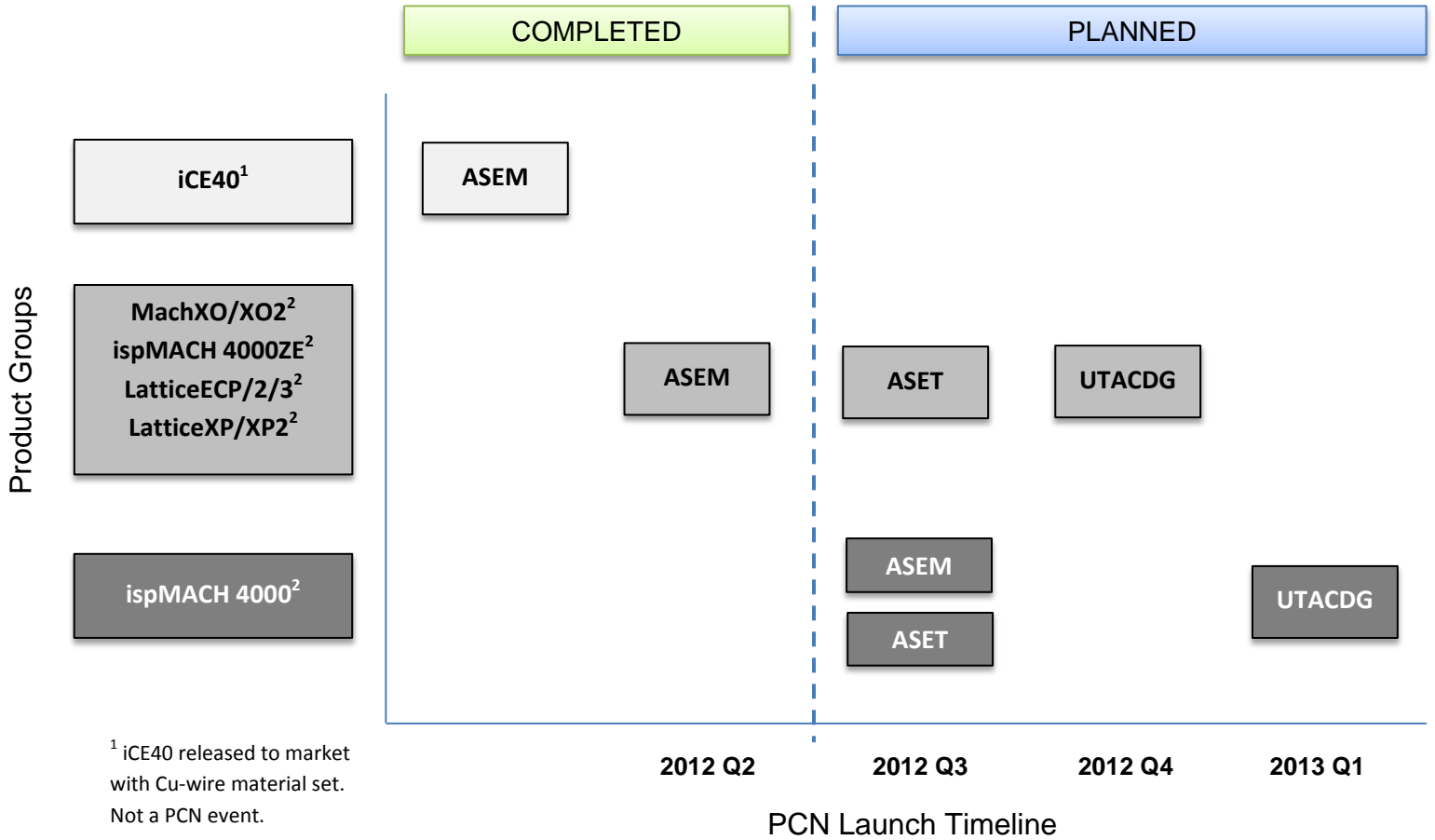
In accordance with JESD46-D, this change is deemed accepted by the customer if no acknowledgement is received within 30 days from this Notice. Lattice PCNs are available on the [Lattice PCN web page](#). Please sign up to receive e-mail PCN alerts by registering [here](#). If you already have a Lattice 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](mailto:pcn@latticesemi.com).

Sincerely,  
Lattice Semiconductor PCN Administration

**Exhibit A: PCN Launch Timeline**



<sup>1</sup> iCE40 released to market with Cu-wire material set. Not a PCN event.

<sup>2</sup> TQFP and BGA packages only