

PROCESS CHANGE NOTIFICATION

PCN1505

Bill of Materials Change for Altera Enpirion QFN Packages

Change Description

Altera® announces a change to the internal inductor from standard terminal type to LGA terminal type for all package size 2.5 x 2.25mm and 3 x 3 mm QFN packaged parts. There is no electrical characteristic difference between the inductor types, only the terminal formation. The list of part numbers affected is available in Appendix 1.

There are no changes to form, fit, function or reliability including device performance and thermal characteristics.

Recommended Action:

This change does not affect the form, fit, function or reliability including device performance and thermal characteristics as defined in Altera's product datasheets. No action is required by customers. Altera will maintain the traceability of all products with the LGA inductor by date code. Upon change implementation (see dates in Table 1), Altera may ship pre-conversion product or post-conversion product, based on inventory availability.

Reason for Change:

Using LGA terminal type inductor for the affected devices will enable Altera to improve the manufacturability and manufacturing cycle time.

Benefit of Change:

Altera is implementing this change to better support the long-term demand of the affected products. Customers will benefit from continued product supply.

Products Affected:

This change will apply to all package size 2.5 x 2.25mm and 3 x 3 mm QFN products. The list of part numbers is available in Appendix 1.

Means to Identify Changed Product:

There is no visible change to the affected products.

Product Transition Dates:

Customers are requested to take note of the key dates shown in Table 1.

Table 1: Product Transition Dates

<i>Milestone</i>	<i>Date</i>
Qualification samples available to order	N/A
Last date to acknowledge receipt of this notification*	08/07/2015
Last date to order qualification samples	N/A
Last date to request additional information or clarification	09/07/2015
Change implementation date (i.e., date shipment of new product will commence)	10/07/2015

* Note, in accordance with JESD46D, this change is deemed acceptable if no response or acknowledgement is received within 30 days from the date of this notification.

Effective the change implementation date listed in Table 1, Altera will begin the shipment of changed product. Altera reserves the right to continue the shipment of pre-conversion product following the change implementation date. In other words, customers should expect to receive a mix of pre-conversion and changed product interchangeably, following the change implementation date.

Samples:

No samples will be provided for this change as customer requalification is not required.

Qualification Data:

Qualification data has been collected to ensure that the changed product meets or exceeds Altera's quality and reliability specifications. This data is summarized in Table 2.

Table 2: Summary of Qualification Data

Qualification Test	Standard	Readout	Results # of Failures / Total Samples Tested
Autoclave @ 121°C/ 100% RH/ 15 PSIG	JESD22-A102	96 hrs	0/240
High Temperature Storage @ 150°C	JESD22-A103	1000 hrs	0/240
Temperature Cycle "C" (-65°C to 150°C)	JESD22-A104	500 cyc	0/240

Contact

For more information, please contact Altera Technical Support by submitting a Service Request at Altera's mySupport website.

Customer Notifications Subscription

Customers that have subscribed to Altera's customer notification mailing list will receive updates automatically via email. If you would like to receive customer notifications by e-mail, please subscribe to our customer notification mailing list at: <https://www.altera.com/subscriptions/email/signup/eml-index.jsp>

In accordance with JESD46D, this change is deemed acceptable to the customer if no acknowledgement is received within 30 days from this notification.

Revision History

Date	Rev	Description
07/21/2015	1.0.0	Initial Release

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Appendix 1: Affected Ordering Part Numbers

EP5358LUI

EP5358HUI

EP5357LUI

EP5357HUI

EP53F8QI

EP53A7LQI

EP53A7HQI

EP53A8LQI

EP53A8HQI

EP5387HQI

EP5387LQI

EP5368QI

EP5388QI