

CUSTOMER ADVISORY

ADV1309

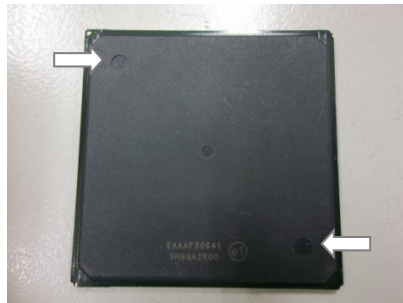
Additional Dimples On Plastic BGA Package Top Surface

Change Description

Altera® announces a minor change to the form of products offered in F484, F672, F780 and F896 (Plastic BGA) packages. Effective immediately, the top surface of the packages may carry additional dimples. The dimples (0.1mm maximum depth) are merely a visual characteristic, and manufacturing packages with dimples facilitates volume optimization between qualified suppliers.

Thermal impedance (θ_{ja} and θ_{jc}) values, package warpage characteristics and heat sink mounting procedures will remain unchanged. Note, there is no impact anticipated or changes required to customers' pick and place equipment or processes. In the representative image in figure 1, the white arrows indicate the location of the additional dimples. See Appendix 1 for the Package Outline Drawing, for material with and without the additional dimples.

Figure 1. Representative image of additional dimples on package top surface



Recommended Action

No action is recommended as a result of this change.

Reason for Change

Altera is implementing this change to facilitate a multi-source supply chain model. This strengthens supply-chain risk-mitigation by establishing the capability to produce equivalent product from multiple qualified locations.

Products Affected

All Altera® products offered in F484, F672, F780 and F896 packages are affected by this change.

This change will take effect immediately.

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>

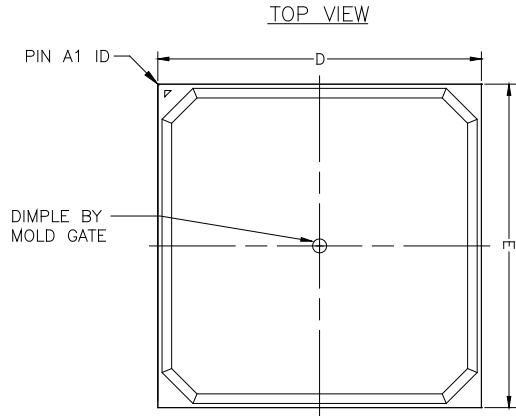
Revision History

Date	Rev	Description
09/18/2013	1.0.0	Initial Release

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Appendix 1: Package Outline Drawing (Top View)

Without Additional Dimples



With Additional Dimples

