



Final Product Change Notification

201401003F01

Issue Date: 15-Jun-2014

Effective Date: 13-Sep-2014

Here's your personalized quality information concerning products Digi-Key purchased from NXP. For detailed information we invite you to [view this notification online](#)



QUALITY

Management Summary

- Introduction of Cu-wire bonding in APB and ASEN for products in the TSSOP48-56 packages.
- Replace Au (gold) wire with Cu (copper) wire in bonding process.

Change Category

- | | | | |
|--|--|---|--|
| <input type="checkbox"/> Wafer Fab process | <input checked="" type="checkbox"/> Assembly Process | <input type="checkbox"/> Product Marking | <input type="checkbox"/> Design |
| <input type="checkbox"/> Wafer Fab materials | <input checked="" type="checkbox"/> Assembly Materials | <input type="checkbox"/> Electrical spec./Test coverage | <input type="checkbox"/> Mechanical Specification |
| <input type="checkbox"/> Wafer Fab location | <input type="checkbox"/> Assembly Location | <input type="checkbox"/> Test Location | <input type="checkbox"/> Packing/Shipping/Labeling |

Cu-wire bonding in APB and ASEN for TSSOP48-56 packages (Phase III)

Details of this Change

Replace Au (gold) wire with Cu (copper) wire in bonding process of TSSOP48-56 packages at APB (NXP Semiconductors Assembly Plant Bangkok Thailand) and ASEN (NXP-ASE JV Suzhou China).

Why do we implement this Change

- Superior electrical resistivity and better thermal conductivity.
- Improved wire-sweep resistance based on mechanical strength.
- A stronger interconnect, which gives improved wire pull and ball shear performance.
- Slower intermetallic growth, due to the lower diffusion rate of copper to aluminium, which gives a more reliable interconnect at high temperature.
- Better electrical performance due to the higher conductivity of copper wire in comparison to gold wire.
- Aligning with world technology trends, NXP starts to introduce copper wire for plastic SMD packages. Copper wire shows enhanced mechanical properties.
- Increased environmental friendliness (eco-friendly).

Identification of Affected Products

The changed products can be identified by backward traceability of their marking date code.

The location code suffix is "X" = ASEN and "n" = APB, and this is marked on line "C" of the product marking.

Product Availability

Sample Information

Samples are available upon request

Samples request for limited quantities can be made via sample store Hong Kong (eSample Center).

Production

Planned first shipment 13-Sep-2014

Impact

no impact to the product's functionality anticipated.

Data Sheet Revision

No impact to existing datasheet

Disposition of Old Products

Existing inventory will be shipped until depleted

Related Notifications

Notification	Issue Date	Effective Date	Title
201202018F0105-Dec-2012	2012	05-Mar-2013	Cu-wire bonding in APB and ASEN for SO14-16 packages
201208012F0105-Dec-2012	2012	05-Mar-2013	Cu-wire bonding in APB and ASEN for TSSOP14-16-20 packages
201304005F0117-Apr-2013	2013	16-Jul-2013	Cu-wire bonding in APB and ASEN for SO14-16 packages (Phase II)
201304006F0117-Apr-2013	2013	16-Jul-2013	Cu-wire bonding in APB and ASEN for TSSOP14-16-20 packages (Phase II)

Timing and Logistics

Your acknowledgement of this change, conform JEDEC JESD46 D, is expected till 15-Jul-2014.

Remarks

- No change to form, fit or function anticipated.
- No influence on quality or reliability anticipated.
- No change to datasheet anticipated.
- No change in ordering 12NC for products in TSSOP48.
- Change in ordering 12NC for products in TSSOP56, this package will be dry packed. See PCN product type list / affected 12NCs.
- No change in product top side marking.

Contact and Support

For all inquiries regarding the ePCN tool application or access issues, please [contact NXP "Global Quality Support Team"](#).

For all Quality Notification content inquiries, please contact your local NXP Sales Support team.

For specific questions on this notice or the products affected please contact our specialist directly:

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NXP Quality Management Team.

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A global semiconductor company with operations in more than 25 countries, NXP posted unaudited revenue

of \$4.36 billion in 2012.

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