



Final Product Change Notification

201412011F01

Issue Date: 11-Jan-2015
Effective Date: 24-Apr-2015

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For detailed information we invite you to view this notification online



QUALITY

Management Summary

- Introduction (additional) Cu-wire bonding SO20 package in ASEN (Phase IV).
- 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 |

Introduction of Cu-wire bonding for SO20 package (Phase IV)

Details of this Change

- Introduction of Cu-wire bonding for SO20 package. (Phase IV).
- Replace Au (gold) wire with Cu (copper) wire in bonding process of SO20 / SOT163 package at ASEN (NXP-ASE JV Assembly Plant 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.
- No change in product top side 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 24-Apr-2015

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
201202018F01	05-Dec-2012	05-Mar-2013	Cu-wire bonding in APB and ASEN for SO14-16 packages
201208012F01	05-Dec-2012	05-Mar-2013	Cu-wire bonding in APB and ASEN for TSSOP14-16-20 packages
201304005F01	17-Apr-2013	16-Jul-2013	Cu-wire bonding in APB and ASEN for SO14-16 packages (Phase II)
201304006F01	17-Apr-2013	16-Jul-2013	Cu-wire bonding in APB and ASEN for TSSOP14-16-20 packages (Phase II)
201401003F01	15-Jun-2014	13-Sep-2014	Cu-wire bonding in APB and ASEN for TSSOP48-56 packages (Phase III)

Timing and Logistics

Your acknowledgement of this change, conform JEDEC JESD46 D, is expected till 10-Feb-2015.

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 part number / 12NC.
- 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:

Name Emile Busink
Position QA engineering Logic Products
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NXP Quality Management Team.

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Changed Orderable Part#	Customer Part#	Changed Part 12NC	Changed Part Description
74HC244D,652	74HC244D,652	933713420652	HC/HCT
74HCT574D,653	74HCT574D,653	933715630653	HC/HCT
74HCT244D,652	74HCT244D,652	933713430652	HC/HCT
74HCT244D,652	74HCT244D,652	933713430652	HC/HCT
74HCT244D,653	74HCT244D,653	933713430653	HC/HCT
74HC374D,652	74HC374D,652	933713480652	HC/HCT
74HC374D,653	74HC374D,653	933713480653	HC/HCT
74HCT374D,653	74HCT374D,653	933713490653	HC/HCT
74HC573D,652	74HC573D,652	933713560652	HC/HCT
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74HCT245D,652	74HCT245D,652	933713590652	HC/HCT
74HCT245D,653	74HCT245D,653	933713590653	HC/HCT
74HC273D,652	74HC273D,652	933715440652	HC/HCT
74HC273D,653	74HC273D,653	933715440653	HC/HCT
74HC373D,652	74HC373D,652	933715470652	HC/HCT
74HC373D,653	74HC373D,653	933715470653	HC/HCT
74HC373D,653	74HC373D,653	933715470653	HC/HCT
74HC541D,652	74HC541D,652	933715500652	HC/HCT
74HC574D,652	74HC574D,652	933715520652	HC/HCT
74HC574D,653	74HC574D,653	933715520653	HC/HCT
74HCT373D,653	74HCT373D,653	933715580653	HC/HCT
74HCT541D,652	74HCT541D,652	933715610652	HC/HCT
74HCT541D,653	74HCT541D,653	933715610653	HC/HCT
74HCT574D,652	74HCT574D,652	933715630652	HC/HCT
74HC244D,653	74HC244D,653	933713420653	HC/HCT