

**Final Product Change Notification**

201808005F01

**Issue Date:** 31-Dec-2018  
**Effective Date:** 31-Mar-2019

Here's your personalized quality information concerning products Digi-Key purchased from Nexperia.  
 For detailed information we invite you to view this notification online



**Management Summary**

Introduction of Cu-wire bonding in ATBK for the NPIC Logic products in SO/TSSOP16 and TSSOP20 packages

**Change Category**

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

Introduction of Cu-wire bonding in ATBK for NPIC Logic products

**Details of this Change**

Replace Au (gold) wire with Cu (copper) wire in bonding process of NPIC Logic products in SO/TSSOP16 and TSSOP20 packages at ATBK (NXP Semiconductors Assembly & Test Plant Bangkok Thailand)

- Front end (diffusion fab) and location will not change

**Why do we Implement this Change**

- Next phase in Cu wire expansion after maturation in commodity Logic products since 2012
- 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, Nexperia 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 marking date code on package

**Product Availability**

**Sample Information**

Samples are available upon request

## Production

Planned first shipment 31-Mar-2019

### Impact

- No change in form, fit, function, quality or reliability anticipated
- No change in die (same electrical distribution)
- No change in data sheet and test limits
- No change in ordering code 12NC's

### 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
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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)

### Timing and Logistics

Your acknowledgement of this change, conform JEDEC J-STD-046, is expected till 30-Jan-2019. Lack of acknowledgement of the PCN constitutes acceptance of the change.

### Contact and Support

For all inquiries regarding the ePCN tool application or access issues, please contact Nexperia "Global Quality Support Team".

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

At Nexperia B.V. we are constantly striving to improve our product and processes to ensure they reach the highest possible Quality Standards.

### About Nexperia B.V.

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### Affected Part Numbers

NPIC6C596D,118

NPIC6C596APWJ

NPIC6C596ADJ

NPIC6C4894PWJ

NPIC6C595PW,118