



## Final Product Change Notification

201609007F01

**Issue Date:** 02-Oct-2016  
**Effective Date:** 01-Apr-2017

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# QUALITY

### Management Summary

- Replace Au (gold) wire with Cu (copper) wire in bonding process
- Add second source for NXP ICN8 fab (Nijmegen, The Netherlands) C075 and C125 processes

### Change Category

- |  |  |   |   |   |
|--|--|---|---|---|
| <input type="checkbox"/> Wafer Fab Process             | <input checked="" type="checkbox"/> Assembly Process   | <input checked="" 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 checked="" 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 and ASMC second source for automotive products

### Details of this Change

Introduction of Cu-wire bonding and ASMC as front end second source for selected automotive logic products

- Replace Au (gold) wire with Cu (copper) wire in bonding process
- Add second source for NXP ICN8 fab (Nijmegen, The Netherlands) C075 and C125 processes

Affected products and locations:

- TSSOP5/6 products from ATSN (NXP Semiconductors Assembly & Test Plant Seremban Malaysia)
- SO and TSSOP products from ATBK (NXP Semiconductors Assembly & Test Plant Bangkok, Thailand) and ASEN (NXP-ASE JV Suzhou, China)
- Second source LVC, AUP and AVC products processed in ASMC (Advanced Semiconductor Manufacturing Corporation Limited in Shanghai China)

Qualification in accordance to the Automotive Electronics Council:

- AEC-Q100-rev. H Stress Test Qualification for Integrated Circuits
- AEC-Q006-rev. A Qualification requirements for Cu wire interconnections

Impact:

- Matching wafer PCM (Process Control Modules) and product parameters by 1.5 delta/sigma
- No change in die layout, all masks are produced from the same GDS2 file
- No change in form, fit, function, quality or reliability

### Why do we implement this Change

- Next phase in Cu wire expansion after maturation in commodity logic products since 2012
- Continued alignment with world technology trends on state of the art production tools
- Copper wire shows enhanced mechanical properties
- Increased environmental friendliness (eco-friendly)
- Front End capacity expansion and add second source for critical logic processes

## Identification of Affected Products

- Assembly changes can be identified by backward traceability of the product marking date code
- Applied wafer fab is indicated on the reel, box label and on the product marking (if space permits)

## Product Availability

### Sample Information

Samples are available upon request

Samples are available upon request from the Logic sample store Nijmegen The Netherlands

### Production

Planned first shipment 01-Apr-2017

## Impact

- No impact to the product's functionality or parametric spread anticipated

### Data Sheet Revision

No impact to existing datasheet

### Disposition of Old Products

Existing inventory will be shipped until depleted

## Related Notifications

<u>Notification</u>	<u>Issue Date</u>	<u>Effective Date</u>	<u>Title</u>
201202018F01	5-Dec-12	5-Mar-13	Cu-wire bonding in APB and ASEN for SO14-16 packages
201208012F01	5-Dec-12	5-Mar-13	Cu-wire bonding in APB and ASEN for TSSOP14-16-20 packages
201304005F01	17-Apr-13	16-Jul-13	Cu-wire bonding in APB and ASEN for SO14-16 packages (Phase II)
201304006F01	17-Apr-13	16-Jul-13	Cu-wire bonding in APB and ASEN for TSSOP14-16-20 packages (Phase II)
201401003F01	15-Jun-14	13-Sep-14	Cu-wire bonding in APB and ASEN for TSSOP48-56 packages (Phase III)
201409013F01	9-Jan-15	24-Apr-15	Introduction of Cu-wire bonding for TSSOP5 and DHVQFN20 packages (Phase IV)
201410001F01	1-Nov-14	13-Feb-15	Introduce ASMC as a second source wafer fab location for 74AUP Logic products
201412011F01	11-Jan-15	24-Apr-15	Introduction of Cu-wire bonding for SO20 package (Phase IV)
201503008F01	26-Mar-15	22-Jul-15	Phase 2: Expansion of industrial footprint for C075 process 74AVC/AUP Logic products
201505005F01	12-Sep-15	25-Dec-15	Phase 3: Expansion of industrial footprint for C075/C125 process 74LVC/AVC/AUP (ASMC)
201605004F01	30-Jun-16	14-Oct-16	Expansion of Cu-wire bonding for TSSOP5/6 packages (Phase V)
201605005F01	30-Jun-16	14-Oct-16	Introduction of Cu-wire bonding for SO20-24 and TSSOP24 packages in ATBK (Phase VI)

## Timing and Logistics

Your acknowledgement of this change, conform JEDEC JESD46 D, is expected till 31-Oct-2016.

## Remarks

Wafer Fab Indicators:

"Y"= ASMC, Shanghai, China

"T"= NXP ICN8, Nijmegen, Netherlands

## 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** PCN specialist - QA engineering Logic Products  
**e-mail address** logic.helpdesk@nxp.com

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NXP Semiconductors  
High Tech Campus, 5656 AG Eindhoven, The Netherlands

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**Affected Part Numbers**

74AHC244PW-Q100,11	NPIC6C595D-Q100,11	74HC74PW-Q100,118	74LVC1G07GW-Q100H
74AHC244PW-Q100,11	NPIC6C595PW-Q100,1	74HCT86D-Q100,118	74LVC125AD-Q100J
74HC14D-Q100,118	NPIC6C595PW-Q100,1	74HC244PW-Q100,118	74LVC125AD-Q100J
74HC14D-Q100,118	74AHC1G08GW-Q100,1	74HCT244D-Q100,118	74HCT2G34GW-Q100H
74HC4051D-Q100,118	74AHC1G08GW-Q100,1	74HCT244D-Q100,118	74HCT2G34GW-Q100H
74HC4051D-Q100,118	74AHCT1G08GW-Q100,	74HC123PW-Q100,118	74LVC2G14GW-Q100H
74HC4051PW-Q100,11	74AHCT1G08GW-Q100,	74HC123PW-Q100,118	74LVC2G14GW-Q100H
74HC4051PW-Q100,11	74AHC595PW-Q100,11	74LV08PW-Q100,118	74HC2G14GW-Q100H
74HC4066D-Q100,118	74AHC1G14GW-Q100,1	74LV08PW-Q100,118	74HC2G14GW-Q100H
74HC4066D-Q100,118	74AHC1G14GW-Q100,1	HEF4013BT-Q100J	74HCT2G14GW-Q100H
74HC4066PW-Q100,11	74AHCT1G14GW-Q100,	HEF4013BT-Q100J	74HCT2G14GW-Q100H
74LVC1G08GW-Q100,1	74HC00D-Q100,118	HEF4794BT-Q100J	74HC2G17GW-Q100H
74LVC1G125GW-Q100,	74HC02D-Q100,118	HEF4794BT-Q100J	74HC2G17GW-Q100H
74LVC1G125GW-Q100,	74HC02D-Q100,118	74HCT1G125GW-Q100H	NPIC6C596APW-Q100J
74LVC1G14GW-Q100,1	74HC04D-Q100,118	74HCT1G125GW-Q100H	NPIC6C596APW-Q100J
74LVC1G14GW-Q100,1	74HC04D-Q100,118	74HC10D-Q100J	NPIC6C4894D-Q100Y
74LVC1G17GW-Q100,1	74HC132D-Q100,118	74HC11PW-Q100J	NPIC6C4894D-Q100Y
74LVC1G17GW-Q100,1	74HC132D-Q100,118	74HC11PW-Q100J	NPIC6C4894PW-Q100J
74HC1G08GW-Q100,12	74HC138D-Q100HL	74HC4094PW-Q100J	NPIC6C4894PW-Q100J
74HC1G08GW-Q100,12	74HC138D-Q100HL	HEF4069UBTT-Q100J	74AUP1G02GW-Q100H
74HCT1G08GW-Q100,1	74HC08D-Q100,118	HEF4069UBTT-Q100J	74AUP1G02GW-Q100H
74HCT1G08GW-Q100,1	74HC151D-Q100,118	74LVC541AD-Q100J	74HC2GU04GW-Q100H
74AHC14PW-Q100,118	74HC4052D-Q100,118	74LVC541AD-Q100J	74HC2GU04GW-Q100H
74AHCT14D-Q100,118	74HC4052D-Q100,118	74HC125PW-Q100J	74AHC1G07GW-Q100H
HEF4052BT-Q100,118	74HC4053D-Q100,118	74HC125PW-Q100J	74AHC1G07GW-Q100H
HEF4052BT-Q100,118	74HC573PW-Q100,118	74AHC1G00GW-Q100H	74AUP1G86GW-Q100H
HEF4093BT-Q100,118	74HC573PW-Q100,118	74AHC1G00GW-Q100H	74AUP1G86GW-Q100H
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NPIC6C596D-Q100,11	74HC595D-Q100,118	74AHC1G02GW-Q100H	74AHC1G66GW-Q100H
NPIC6C596D-Q100,11	74HC595PW-Q100,118	74AHCT541PW-Q100J	
NPIC6C596PW-Q100,1	74HC595PW-Q100,118	74AUP1G32GW-Q100H	
NPIC6C596PW-Q100,1	74HC74D-Q100HL	74AUP1G32GW-Q100H	
NPIC6C595D-Q100,11	74HC74D-Q100HL	74LVC1G07GW-Q100H	