



## Advance Product Change Notification

201601003A

**Issue Date:** 27-Feb-2016

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# QUALITY

### Change Category

<input checked="" type="checkbox"/> Wafer Fab process	<input type="checkbox"/> Assembly Process	<input type="checkbox"/> Product Marking	<input checked="" type="checkbox"/> Design
<input checked="" 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

Release of copper bond wire, new mold compounds and 8 inch wafer diameter in SOT223

### Details of this Planned Change

Scheduled changes affect product types in SOT223 package only.

- (1) The bond wire material will be changed from gold (Au) to copper (Cu). Gold wire remains qualified for supply security reasons only.
- (2) Second source mold compound suppliers will be introduced as new alternative sources for copper wire products.
- (3) The leadframe will be changed to a new design.
- (4) Release of production using 8 inch wafer diameter.
- (5) Several product types will be changed to a smaller die pitch size (400µmx400µm instead of 500µmx500µm resp. 520µmx520µm).

Old product: production using 6 inch wafer diameter, wire material is Au (with currently used mold compound and leadframe design)

Changed product: production using 6 and 8 inch wafer diameter, wire material is Cu (with currently used first and new second source mold compound, changed leadframe design) or Au (with currently used first and new second source mold compound, changed leadframe design), partly changed die pitch size (only in combination with 8 inch wafer diameter)

Reliability qualification and full electrical characterization over temperature will be performed. No change on thermal behavior or mechanical dimensions. Electrical parameters remain unchanged (in specification and

with the same distribution).

### **Why do we Plan this Change**

- (1) Aligning with world technology standards, NXP continues to introduce copper wire for plastic SMD packages. Copper wire shows enhanced mechanical properties.
- (2) Following NXP company policy and second source material availability, new second source mold compounds will be added to the BOM. The second sources are already well-established mold compound suppliers for NXP GA discrete semiconductor products.
- (3) Standardisation of leadframe design with similar package SOT89. Leadframes with grooves are in production for SOT89 types since 2006.
- (4) To increase flexibility and volume ramp-up.
- (5) Volume ramp-up, increase of wafer fab capacity and flexibility.

### **Identification of Affected Products**

The 8 inch products can be identified by a marker on the die surface.  
Changed products can be identified by date code after implementation.

## **Product Availability**

### **Sample Information**

Samples are available upon request  
Samples can be ordered now and will be shipped latest with FPCN issue date.

### **Impact**

No impact to the products' functionality anticipated.

### **Data Sheet Revision**

No impact to existing datasheet

### **Disposition of Old Products**

Existing inventory will be shipped until depleted  
Supply using 6 inch wafer will be continued in parallel to 8 inch wafer production.

## **Timing and Logistics**

The Self Qualification Report will be ready on 22-Apr-2016.  
The Final PCN is planned to be issued on: 22-Apr-2016.  
Your acknowledgement of this change, conform JEDEC JESD46 D, is expected till 28-Mar-2016.

## **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** GA Customer Support  
**e-mail address** DiscrQA.Helpdesk.GA-Products@nxp.com

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NXP Quality Management Team.

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