



## Advanced Product Change Notification

202105016A : Introduction of Copper Wire BOM for Mantra F/CS Family

**Note:** This notice is NXP Company Proprietary.

**Issue Date:** May 25, 2021

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For detailed information we invite you to view this notification online

### Management summary

Introduction of Copper Wire BOM for Mantra F /CS product family, including MantraF (NCF2984), MantraCS (NCK2982) and Cobra (NCK2912).

### Change Category

<input type="checkbox"/> Wafer Fab Process	<input type="checkbox"/> Assembly Process	<input checked="" type="checkbox"/> Product Marking	<input type="checkbox"/> Test Process	<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 Equipment	<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 Location	<input type="checkbox"/> Electrical spec./Test coverage
<input type="checkbox"/> Firmware	<input type="checkbox"/> Other			

## PCN Overview

### Description

With this Advance PCN, we pre-announce the introduction of copper wire bonding and adapted BOM for the MantraF/CS product family.

The MantraF /CS product family consists of NCF2984 (MantraF), NCK2982 (MantraCS) and NCK2912 (Cobra).

The 'Copper Wire BOM\*' is a proven and qualified combination of assembly materials when using copper as wire bond material.

\*BOM = bill of material

For MantraF (HVQFN40) bond wire, mold compound, and leadframe plating are changed. Corresponding ZVEI Delta Qualification Matrix IDs: SEM-PA-04, SEM-PA-05, SEM-PA-08, SEM-PA-11, SEM-PA-13.

For MantraCS/Cobra (HVQFN48) bond wire, mold compound, and leadframe dimensions are changed. Corresponding ZVEI Delta Qualification Matrix IDs: SEM-PA-03, SEM-PA-08, SEM-PA-11, SEM-PA-13.

For a detailed explanation of the changes and the qualification plan, please refer to the information packages attached to this APCN.

This change is only related to package assembly materials. There is no change in IC design or wafer diffusion.

Furthermore,

- No change on external dimensions and mechanical performance.
- No change of electrical parameters (incl. ESD robustness)
- No change of thermal characteristics
- No change of reliability performance

Qualification will be performed according to AEC-Q100 and AEC-Q006. Structural similarity rules will be applied where possible.

The actual change-over will be announced by final PCNs in Q3/2021 for each product family. These notifications will include qualification results and information on sample availability.

#### **Reason**

The transition from gold wire to copper wire is in line with the global trend in the semiconductor industry.

Copper wiring provides excellent electrical and thermal conductivity, durability and ductility at an economic cost.

#### **Identification of Affected Products**

Replacement part type created, see Parts Affected list

#### **Product Availability**

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#### **Sample Information**

Sample Planning follows with the final PCN

#### **Production**

Shipment dates are product specific, see attached plan

#### **Anticipated Impact on Form, Fit, Function, Reliability or Quality**

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No Impact on form, fit, function, reliability or quality

#### **Data Sheet Revision**

A new datasheet will be issued

#### **Disposition of Old Products**

Existing inventory will be shipped until depleted

#### **Timing and Logistics**

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The Self Qualification Report will be ready on Aug 06, 2021.

The Final PCN is planned to be issued on: Aug 06, 2021.

In compliance with JEDEC J-STD-046, your acknowledgement of this change is expected by Jun 24, 2021.

Expected timeline:

Final PCN for MantraF: Q3/2021

Final PCN for MantraCS/Cobra: Q3/2021

#### **Remarks**

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This APCN is an pre-announcement only.

Customer approval is expected for the corresponding final PCN.

The complete ZVEI DeQuMa as well as a detailed information package for each type family is attached to this APCN. Please use the link 'view online'.

## Contact and Support

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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.

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

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<b>Affected Part Numbers</b>	<b>12NC</b>	<b>New Part Numbers</b>	<b>12NC New</b>
NCF2984AHN/T0BY	935305708518	NCF2984AHN/T0B/UY	935426328518
NCF2984AHN/T0BEY	935334305518	NCF2984AHN/T0BE/UY	935426327518
NCK2982AHN/T0BY	935305696518	NCK2982AHN/T0B/UY	935426323518
NCK2912AHN/T0BY	935305709518	NCK2912AHN/T0B/UY	935426316518