



# Product Change Notification

ENP-PCN-2010-01 Rev 01  
June 28, 2010

## PCN Overview

PCN Original Issue Date:	April 12, 2010	
Type of Change Notification:	Assembly material & site change	
Qualification Complete:	June 15, 2010	
Sample Availability:	June 15, 2010	
Expected First Ship Date:	August 15, 2010	
Last Date to Buy Pre-Change Product:	N/A	
Affected Products:	EN5322QI, EA102BCM, EN103INT, EN106AMN	
Reference Documents:	JEDEC Standard JESD46C Prod Mark Spec OP-L01a_V9-02.pdf	
PCN Revision History:		
Revision Date: April 12, 2010	Revision Number: 00	Reason: initial issue
Revision Date: June 28, 2010	Revision Number: 01	Reason: qualification complete

## Description of Change

Enpirion has qualified copper bond material for QFN devices at HANA Semiconductor, Thailand.

Enpirion reserves the right to ship devices with either gold or copper wire bonds.

## Customer Impact of Change and Recommended Action

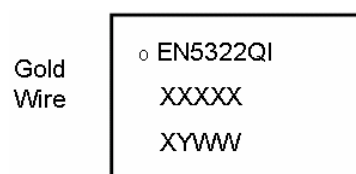
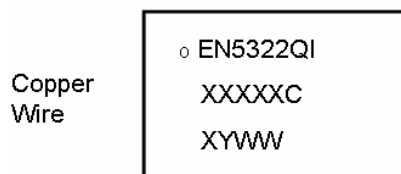
There is no customer impact since there is no change in form, fit, function, reliability and quality of the products.

## Reason for Change

Copper wire is increasingly becoming the material of choice for wire bonding in the semiconductor industry due to the spiraling cost of gold. Addition of copper wire as a qualified material for assembly is an integral part of Enpirion's cost containment strategy while enabling manufacturing flexibility and ensuring long term continuity of supply.

## Product Identification

Products with copper wire will be easily identifiable by the letter C at the end of the Lot Number on the second row of the device marking.



**Product Qualification Data**

Devices manufactured with copper wire bonds at HANA Semiconductor, Thailand

Item	Reliability Test	Test Condition & Standard	Test Results (Qty: Pass/Fail)		
			Lot #1	Lot #2	Lot #3
1	High Temperature Operating Life (HTOL)	JESD22-A108 (125°C, Vin-max, 1000 hours)	26/0	26/0	26/0
2	High Temperature Storage (HTS)	JESD22-A-103-C (150°C, 1000 hours, Condition B)	80/0	80/0	80/0
3	Pre-Conditioning	JESD22-A-113 and J-STD-020	200/0	160/0	160/0
4	Temperature Humidity Bias with Pre-Conditioned Devices from Item 3	JESD22-A101 (85°C/85%RH, Vin-max, 500 hours)	40/0	—	—
5	Autoclave with Pre-Conditioned Devices from Item 3	JESD22-A102C (100%RH, 121°C, 96 hours, Condition C)	80/0	80/0	80/0
6	Temperature Cycle with Pre-Conditioned Devices from Item 3	-65°C to +150°C / 500 cycles JESD22-A104, Condition C, Soak Mode 5	80/0	80/0	80/0

Product characterization data and product samples are available on request.

**Customer Acknowledgement**

Customers are requested to acknowledge this notification within 30 days of its issue date. Lack of response within 30 days of PCN release will constitute an acceptance of the change.

Please contact Enpirion at [customerservice@enpirion.com](mailto:customerservice@enpirion.com), your manufacturers' representative, or distributor if you have any issues with this PCN or require additional information.

Customer: \_\_\_\_\_ Name: \_\_\_\_\_  
 Title: \_\_\_\_\_ Phone: \_\_\_\_\_ Email: \_\_\_\_\_  
 Customer Comments: \_\_\_\_\_  
 Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Contact Information**

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**To locate your area Representative or Distributor visit the Enpirion Website: [www.enpirion.com](http://www.enpirion.com)**

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