Product Change Notification

ENP-PCN-2010-01
April 12, 2010

PCN Overview
PCN Original Issue Date: April 12, 2010
Type of Change Notification: Assembly material & site change
Expected Qualification Date: May 24, 2010
Sample Availability: June 1, 2010
Expected First Ship Date: July 15, 2010
Last Date to Buy Pre-Change Product: Jan 15, 2011
Affected Products: EN5322QI, EA102BCM, EN103INT, EN106AMN
Reference Documents: JEDEC Standard JESD46C

PCN Revision History:
Revision Date: April 12, 2010    Revision Number: 00    Reason: initial issue

Description of Change
Enpirion is converting to copper wire as a qualified wire bond material for QFN devices. The device assembly will be done by HANA Semiconductor, Thailand.

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. Conversion to copper wire 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. The product identification details will be provided in the next issue of this PCN prior to first shipment.
## Product Qualification Plan

The qualification data will be provided after completion in the next issue of this PCN.

<table>
<thead>
<tr>
<th>Item</th>
<th>Reliability Test</th>
<th>Test Condition &amp; Standard</th>
<th>Test Results (Qty: Pass/Fail)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>High Temperature Operating Life (HTOL)</td>
<td>JESD22-A108 (125°C, Vin-max, 1000 hours)</td>
<td>Lot #1 Lot #2 Lot #3</td>
</tr>
<tr>
<td>2</td>
<td>High Temperature Storage (HTS)</td>
<td>JESD22-A-103.C (150°C, 1000 hours, Condition B)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Pre-Conditioning</td>
<td>JESD22-A-113 and J-STD-020</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Temperature Humidity Bias with Pre-Conditioned Devices from Item 3</td>
<td>JESD22-A101 (85°C85%RH, Vin-max, 1000 hours)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Autoclave with Pre-Conditioned Devices from Item 3</td>
<td>JESD22-A102C (100%RH, 121°C, 96 hours, Condition C)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Temperature Cycle with Pre-Conditioned Devices from Item 3</td>
<td>-65°C to +150°C / 500 cycles JESD22-A104, Condition C, Soak Mode 5</td>
<td></td>
</tr>
</tbody>
</table>

Product characterization data and product samples will be 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 acknowledgement.

Please contact Enpirion at 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

**Enpirion Headquarters:**
Enpirion, Inc.
Perryville III
53 Frontage Road, Suite 210
Hampton, NJ 08827

Phone: 908 894 6000   Fax: 908 894 6090
Customer Service: 408 904 2801   Email: customerservice@enpirion.com

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

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