Enpirion is converting to copper wire as a qualified wire bond material for device packaging.

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

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

Copper wire is increasingly becoming the material of choice for wire bonding in the semi-conductor 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.

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 (Copper Wire)

Over the past one year, Enpirion has manufactured over 3 million devices with copper wire bonds with excellent results. Enpirion also has extensive amount of reliability qualification data for devices in QFN packages and is summarized in the table below.

<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></td>
<td></td>
<td></td>
<td>4x4x0.75mm QFN</td>
</tr>
<tr>
<td>2</td>
<td>High Temperature Storage (HTS) JESD22-A103.C (150°C, 1000 hours, Condition B)</td>
<td></td>
<td>80 / 0</td>
</tr>
<tr>
<td>3</td>
<td>Pre-Conditioning JESD22-A.113 and J.STD.020</td>
<td></td>
<td>240 / 0</td>
</tr>
<tr>
<td>4</td>
<td>Temperature Humidity Bias with Pre-Conditioned Devices from Item 3 JESD22-A101 (85°C/85%RH, Vin-max, 1000 hours)</td>
<td></td>
<td>80 / 0</td>
</tr>
<tr>
<td>5</td>
<td>Autoclave with Pre-Conditioned Devices from Item 3 JESD22-A102C (100°F/RH, 121°C, 96 hours, Condition C)</td>
<td></td>
<td>80 / 0</td>
</tr>
<tr>
<td>6</td>
<td>Temperature Cycle with Pre-Conditioned Devices from Item 3 JESD22-A104, Condition C, Soak Mode 5 -45°C to +150°C / 500 cycles</td>
<td></td>
<td>80 / 0</td>
</tr>
</tbody>
</table>

- Additional reliability qualification data for EN5330DC consisting of Pre-Conditioning, Autoclave and Temperature Cycling will be available by 11/14/11

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, 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

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