



Integrated Device Technology, Inc.  
6024 Silver Creek Valley Road, San Jose, CA - 95138

## PRODUCT/PROCESS CHANGE NOTICE (PCN)

<b>PCN #:</b> <b>A1110-04</b> <b>DATE:</b> <b>November 3, 2011</b> <b>Product Affected:</b> 15.0mm x 15.0mm FPBGA-324 (green) (Refer to Attachment 2 for affected part#)  <b>Date Effective:</b> <b>February 3, 2012</b>	<b>MEANS OF DISTINGUISHING CHANGED DEVICES:</b> <input type="checkbox"/> Product Mark <input checked="" type="checkbox"/> Back Mark      Lot # will have a "Y" suffix <input type="checkbox"/> Date Code <input type="checkbox"/> Other
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<b>Contact:</b> PS Tow <b>Title:</b> Director, Product Assurance <b>Phone #:</b> (408) 284-8206 <b>Fax #:</b> (408) 284-1450 <b>E-mail:</b> <a href="mailto:pstow@idt.com">pstow@idt.com</a>	<b>Attachment:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <b>Samples:</b> Contact your local IDT sales representative for sample requests.
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**DESCRIPTION AND PURPOSE OF CHANGE:**

<input type="checkbox"/> Die Technology <input type="checkbox"/> Wafer Fabrication Process <input type="checkbox"/> Assembly Process <input type="checkbox"/> Equipment <input checked="" type="checkbox"/> Material <input type="checkbox"/> Testing <input type="checkbox"/> Manufacturing Site <input type="checkbox"/> Data Sheet <input type="checkbox"/> Other	<p>This notification is to advise our customers that IDT is adding additional package type, 15.0mm x 15.0mm FPBGA-324 (green) converting to Copper bond wire process at Amkor, Philippines and plans to ship products with Copper bond wire process starting February 3, 2012.</p> <p>There is no change to the moisture performance of these packages.</p> <p>Please refer to the following attachments for additional information. Attachment 1 outlines the qualification data. Attachment 2 shows the affected part numbers.</p>
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**RELIABILITY/QUALIFICATION SUMMARY:**

There is no expected change to the product quality or reliability performance.

**CUSTOMER ACKNOWLEDGMENT OF RECEIPT:**

IDT records indicate that you require written notification of this change. Please use the acknowledgement below or E-Mail to grant approval or request additional information. If IDT does not receive acknowledgement within 30 days of this notice it will be assumed that this change is acceptable.

IDT reserves the right to ship either version manufactured after the process change effective date until the inventory on the earlier version has been depleted.

Customer: _____	<input type="checkbox"/> <i>Approval for shipments prior to effective date.</i>
Name/Date: _____	E-Mail Address: _____
Title: _____	Phone# /Fax# : _____

**CUSTOMER COMMENTS:** \_\_\_\_\_

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**IDT ACKNOWLEDGMENT OF RECEIPT:**

RECD. BY: \_\_\_\_\_      DATE: \_\_\_\_\_



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### ATTACHMENT 1 - PCN # : A1110-04

**PCN Type:** Assembly Material Change - Gold wire to Copper wire

**Data Sheet Change:** None

**Detail Of Change:**

This notification is to advise our customers that IDT is adding additional package type, 15.0mm x 15.0mm FPBGA-324 (green) converting to Copper bond wire process at Amkor, Philippines and plans to ship products with Copper bond wire process starting February 3, 2012.

Presently, Amkor Philippines is a qualified assembly location for Copper bond wire process on packages as follows:

TSSOP 16, 20, 24 (green)  
TSSOP 48, 56, 64 (black & green)  
SOIC 8 (black & green)  
SSOP 48, 56 (green)

Customers may expect to receive shipments with Copper bond wire process no sooner than 90 days from the date of this notification, November 3, 2011. Product assembled with Gold and Copper wire will be shipped during the transition period or until the Gold wire inventory has been depleted. However please note that product assembled with Gold and Copper wire will not be mixed in one tray stack, or tape and reel.

We request you to acknowledge receipt of this notification within 30 days of the date of this PCN notification. If you require samples to conduct evaluations, please make your sample request within 30 days as samples are not built ahead of the change for all device options. You may contact your local sales representative to acknowledge this PCN and request samples.



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### ATTACHMENT 1 - PCN # : A1110-04

**Assembly Material :** 0.8 mil Copper wire. There is no change in the mold compound and die attach materials. The material set used in assembly is in compliance with ROHS 6 (green products) requirement. There is no change in the moisture sensitivity performance.

**Sample Availability :** Samples are not built ahead of the change for all device types and may not be available for all affected device types.  
Please contact your local IDT sales representative for your sample request and availability.

#### Qualification Test Result :

##### 1. Copper Bond Wire Qual Results

Qual Vehicle: 15.0mm x 15.0mm FPBGA-324 (green), 3 lots

Qual Plan#: P10-03-11

Test Description	Test Method	Test Results (SS / Rej)		
		Lot1	Lot2	Lot3
* High Accelerated Stress Test (Biased, 130 °C/85% RH, 100 Hrs)	JESD22-A110	25/0	25/0	25/0
* Temperature Cycle / Condition B (-55 °C to +125 °C, 1000 Cyc)	JESD22-A104	25/0	25/0	25/0
High Temp. Storage Test (150 °C, 1000 Hrs)	JESD22-A103	25/0	25/0	25/0
Ball Shear Test	JESD22-B116	5/0	5/0	5/0
Wire Bond Pull Test	IDT Spec MAC-3010	5/0	5/0	5/0
X-ray Examination	IDT Spec MAC-3012	45/0	45/0	45/0

Note:

\* Test requires moisture pre-conditioning sequence per JESD22-A113C and will use the existing moisture sensitivity level that has been qualified for this material set.

##### 2. Product Electrical Characterization

Product electrical characterization has been successfully completed on the representative product in the family and copper wire performance was comparable to gold wire performance.



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**PRODUCT/PROCESS CHANGE NOTICE (PCN)**

**ATTACHMENT 2 - PCN # : A1110-04**

**Affected Part Number**

<b>Part Number</b>	<b>Part Number</b>	<b>Part Number</b>	<b>Part Number</b>
VPP1552BFG	VPP1552ZBFG	VPP1554BFG	VPP1554BFG8
VPP1552BFG8	VPP1552ZBFG8		