



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

PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: A1402-01 DATE 5-Mar-2014 Product Affected: 27.0mm x 27.0mm FCBGA-676 Refer to Attachment II for the affected part numbers Date Effective: 4-Jun-2014	MEANS OF DISTINGUISHING CHANGED DEVICES: <input type="checkbox"/> Product Mark <input checked="" type="checkbox"/> Back Mark Lot# will have a "AT" prefix to denote alternate site, Amkor Taiwan. <input type="checkbox"/> Date Code <input type="checkbox"/> Other
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Contact: IDT PCN DESK E-mail: pcndesk@idt.com	Attachment: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Samples: Please contact your local sales representative for sample request & availability.
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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 type="checkbox"/> Material <input type="checkbox"/> Testing <input checked="" 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 Amkor, Taiwan (ATT) as an alternate assembly facility for the selective devices of the FCBGA package types. The die bump material used at ATT will be Eutectic bump and the underfill material will be NAU-27.</p> <p>There is no change to the moisture performance.</p> <p>Attachment I details the qualification data for this change and Attachment II shows the affected list of part numbers.</p>
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RELIABILITY/QUALIFICATION SUMMARY:
Refer to qualification data shown in attachment I.

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: _____

IDT ACKNOWLEDGMENT OF RECEIPT:

RECD. BY: _____ DATE: _____



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ATTACHMENT I - PCN # : A1402-01

PCN Type: Manufacturing Site - Alternate Assembly Location

Data Sheet Change: None

No change in moisture sensitivity level (MSL)

Detail Of Change:

This notification is to advise our customers that IDT is adding Amkor, Taiwan (ATT) as an alternate assembly facility for the selective devices of the FCBGA package types. The die bump material used at ATT will be Eutectic bump and the underfill material will be NAU-27.

The material sets used at Amkor, Taiwan are qualified IDT materials.

There is no change to the moisture performance of these packages using the assembly material sets as listed in the below table.

Table 1: Assembly Material Sets for the Existing Assembly & Alternate Assembly

Package Type	Material Set / Assembly	Existing	Add
		Amkor, Philippines (ATP)	Amkor, Taiwan (ATT)
BR676	Heat spreader thermo grease	TTG3	SHA-1
	Adhesive	DCL-4	DCL-4
	Die bump	95Pb5Sn (High Pb)	63Sn37Pb
	Underfill	NAU-8	NAU-27
	Substrate	ABF GX13/ E679 core	ABF GX13/ E679 core
	Solder balls	Sn96.5/Ag3.0/Cu0.5	Sn96.5/Ag3.0/Cu0.5
RM676	Heat spreader thermo grease	N/A	N/A
	Adhesive	N/A	N/A
	Die bump	95Pb5Sn (High Pb)	63Sn37Pb
	Underfill	NAU-8	NAU-27
	Substrate	ABF GX13/ E679 core	ABF GX13/ E679 core
	Solder balls	Sn96.5/Ag3.0/Cu0.5	Sn96.5/Ag3.0/Cu0.5



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Qualification Test Plans and Results :

Qual Plan & Results: The qualification was performed in accordance with JEDEC47 recommended tests.

Qual Vehicle: 19.0mm x 19.0mm FCBGA-324 (3 lots) and 27.0mm x 27.0mm FCBGA-676 (1 lot)

Test Description	Test Method	Test Results (SS / Rej)			
		Lot 1	Lot 2	Lot 3	Lot 4
* HAST - unbiased (130 °C/85% RH, 96 Hrs)	JESD22-A118	30/0	30/0	30/0	30/0
* Temperature Humidity Biased (85 °C/85% RH, 1000 Hrs)	JESD22-A101	25/0	25/0	25/0	25/0
* Temperature Cycle / Condition B (-55 °C to +125 °C, 700 Cyc)	JESD22-A104	30/0	30/0	30/0	30/0
High Temp. Storage Test (150 °C, 1000 Hrs)	JESD22-A103	30/0	30/0	30/0	30/0
Solder Ball Shear Test (1000 Hrs)	JESD22-B117	5/0	5/0	5/0	-
External Visual Inspection	JESD22-B101	25/0	25/0	25/0	25/0
X-ray Examination	IDT Spec MAC-3012	45/0	45/0	45/0	45/0

Note:

* Test requires moisture pre-conditioning sequence per JESD22-A113 prior to stress test



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ATTACHMENT II - PCN # : A1402-01

Affected Part Numbers

Part Number	Part Number	Part Number	Part Number
80KSW0005BR	80KSW0005BRI	80KSW0005RM	80KSW0005RMI
80KSW0005BR8	80KSW0005BRI8	80KSW0005RM8	80KSW0005RMI8