



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

PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: A1210-01 Product Affected: 17.0mm x 17.0mm CABGA-256 Date Effective: 21-Mar-2013	DATE: 21-Dec-2012	MEANS OF DISTINGUISHING CHANGED DEVICES: <input checked="" type="checkbox"/> Product Mark <input type="checkbox"/> Back Mark <input type="checkbox"/> Date Code <input type="checkbox"/> Other Change in substrate supplier is traceable through assembly lot code
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Contact: Mary Vesey Title: Director, Product Assurance Phone #: (408) 284-4565 Fax #: (408) 284-1450 E-mail: Mary.Vesey@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 type="checkbox"/> Manufacturing Site <input type="checkbox"/> Data Sheet <input checked="" type="checkbox"/> Other - Alternate Substrate Supplier	<p>This notification is to advise our customers that IDT has qualified Kinsus as the alternate substrate supplier for 17.0mm x 17.0mm CABGA-256 package. There is similar substrate material, same number of layers or assembly materials.</p> <p>Refer to attachments for additional details.</p> <ol style="list-style-type: none"> 1. Comparison between the existing and the alternate substrate supplier 2. Alternate supplier, Kinsus Qualification Data
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RELIABILITY/QUALIFICATION SUMMARY:
Refer to qualification report shown in attachment.

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 # : A1210-01

PCN Type: Alternate Substrate Supplier
Data Sheet Change: None
 No change in moisture sensitivity level (MSL)

Detail Of Change:

This notification is to advise our customers that IDT has qualified Kinsus as the alternate substrate supplier for 17.0mm x 17.0mm CABGA-256 package. There is similar substrate material, same number of layers or assembly materials. Kinsus has been a qualified substrate supplier for IDT BGA packages. IDT has been shipping BGA products with Kinsus substrate in such package families as SBGA, FPBGA, PBGA, FCBGA including CVBGA-25 and CVBGA-100.

Refer to below table for comparison of the existing and the alternate substrate material.

Description	Eastern (Existing Supplier)	Kinsus (Alternate Supplier)
Manufacturing Location	Taiwan	Taiwan
Core Material	HL832NX	HL832NX-A
# of Layers	4	4
Soldermask Material	AUS308	AUS308
SolderMask Thickness	20um (min)	20um (min)
Substrate Thickness	560+/-40um	560+/-40um
SR Opening	400um	400um
Surface Finish	Ni/Au Plating	Ni/Au Plating
Surface Finish Thickness	Ni: 5um Min / Au: 0.5um Min	Ni: 5um Min / Au: 0.5um Min
Pad Type	BGA	BGA
Glass Transition Temp	230 °C	230 °C
Modulus Elasticity (BT Base Material)	28 Gpa	28 GPa
CTE (BT Base Material)	14 ppm/°C (X,Y <Tg)	14 ppm/°C (X,Y <Tg)



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ATTACHMENT I - PCN # : A1210-01

Qualification Test Plans and Results:

Qual Vehicle: 17.0mm x 17.0mm CABGA-256 (1 lot)

Test Description	Test Method	Test Results (SS / Rej)
Solder Ball Shear Test (1000 hrs)	JESD22-B117	5/0
Physical Dimensions	JESD22-B100	30/0
Ball Shear Test	JESD22-B116	5/0
Bond Pull Test	IDT Spec MAC-3010	5/0
X-Ray Examination	IDT Spec MAC-3012	45/0
External Visual Inspection	JESD22-B101	25/0
Internal Visual Inspection	MIL-STD883, Method 2010	5/0



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ATTACHMENT II - PCN # : A1210-01

Affected Part Numbers

Part Number	Part Number	Part Number	Part Number
70V5388S100BC	70V5388S133BC8	70V5388S166BCI	70V5388S200BC8
70V5388S100BC8	70V5388S166BC	70V5388S166BCI8	70V5388S200BCG
70V5388S133BC	70V5388S166BC8	70V5388S200BC	