



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

## PRODUCT/PROCESS CHANGE NOTICE (PCN)

<b>PCN #:</b> <b>A1808-02</b> <b>DATE:</b> <b>5-Sep-2018</b> <b>Product Affected:</b> 4RCD0229KB1ATG 4RCD0229KB1ATG8 4RCD0229KB1ATG/M 4RCD0229KB1ATG8/M 4RCD0229KB1ATG8/B  <b>Date Effective:</b> <b>5-Dec-2018</b>	<b>MEANS OF DISTINGUISHING CHANGED DEVICES:</b> <input type="checkbox"/> Product Mark <input checked="" type="checkbox"/> Back Mark            Assembly lot# will have a suffix "E" <input type="checkbox"/> Date Code <input type="checkbox"/> Other
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<b>Contact:</b> IDT PCN DESK  <b>E-mail:</b> <a href="mailto:pcndesk@idt.com">pcndesk@idt.com</a>	<b>Attachment:</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  <b>Samples:</b> 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 checked="" type="checkbox"/> Material <input type="checkbox"/> Testing <input type="checkbox"/> Manufacturing Site <input type="checkbox"/> Data Sheet <input type="checkbox"/> Other	<p>This notice is to advise our customers that IDT has successfully qualified an alternate substrate material, ETS for the select products.</p> <p>There is no change to the moisture performance.</p> <p>Attachment I details the qualification data for this change.</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 # : A1808-02

**PCN Type:** Adding Alternate Materials  
**Data Sheet Change:** None  
No change in moisture sensitivity level (MSL)

#### Detail Of Change:

This notice is to advise our customers that IDT has successfully qualified an alternate substrate material, ETS for the select products. Refer Table 1 for comparizon of the existing substrate and the new alternate substrate.

There is no change to the moisture performance of this package.

Table 1: Substrate Material Comparizon

Description	Current Substrate	Alternate Substrate
Substrate Structure	6 Layers MSAP	4 Layers ETS
Bottom Solder Mask Layer	AUS320	SR1
Layer 1-2	GHPL830NS	GHPL830NS
Core Layer	HL832NS	No Core
Layer 3-4	GHPL830NS	GHPL830NS
Bottom Solder Mask Layer	AUS320	SR1



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#### Qualification Information and Qualification Data:

**Affected Packages:** FCCSP-253

**Qual Plan & Results:** Tests are in accordance with JEDEC47 recommended tests.

**Qualification Vehicle:** FCCSP-253 (3 lots)

Test Description	Test Method	Test Results (Rej / SS)		
		Lot 1	Lot 2	Lot 3
* Temperature Cycling (-55°C to 125°C, 700 cycles)	JESD22-A104	0/25	0/25	0/25
* HAST - biased (130 °C/85% RH, 96 Hrs)	JESD22-A110	0/25	0/25	0/25
High Temperature Storage Bake (150°C, 1000 Hrs)	JESD22-A103	0/25	0/25	0/25
Solder Ball Shear Test	JESD22-B117	0/5	0/5	0/5
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 3, 260 °C	0/25	0/25	0/25

\* Tests were subjected to Preconditioning per JESD22-A113 prior to stress test