



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

PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: **A1809-04** Date: October 24, 2018
Product Affected: VFQFPN packages
(Refer to Attachment II for the affected part numbers)

Date Effective: January 24, 2019

MEANS OF DISTINGUISHING CHANGED DEVICES:

- | | |
|--|-----------------------------------|
| <input checked="" type="checkbox"/> Product Mark | Lot # will have following prefix: |
| <input type="checkbox"/> Back Mark | "RC" prefix for ASECL, Taiwan |
| <input type="checkbox"/> Date Code | "R" denote ASEK, Taiwan |
| <input type="checkbox"/> Other | "MS" denote Carsem S, Malaysia |

Contact: IDT PCN DESK

Attachment: Yes No

E-mail: pcndesk@idt.com

Samples: Please contact your local sales representative for sample request.

DESCRIPTION AND PURPOSE OF CHANGE:

- Die Technology
- Wafer Fabrication Process
- Assembly Process
- Equipment
- Material
- Testing
- Manufacturing Site
- Data Sheet
- Other

This notification is to advise our customers that IDT is adding ASECL, Taiwan; ASEK, Taiwan and Carsem (S site), Malaysia as alternate assembly facilities for parts that are currently assembled at UTL, Thailand.

There is no change to the moisture performance.

Attachment 1 details the qualification results.

RELIABILITY/QUALIFICATION SUMMARY:

Qualifications have passed. There is no change in MSL rating.

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: _____ *Approval for shipments prior to effective date.*

Name/Date: _____ E-Mail Address: _____

Title: _____ Phone# /Fax# : _____

CUSTOMER COMMENTS:

IDT ACKNOWLEDGMENT OF RECEIPT:

RECD. BY: _____ DATE: _____



PRODUCT/PROCESS CHANGE NOTICE (PCN)

ATTACHMENT 1 - PCN # : A1809-04

PCN Type: Manufacturing Site - Alternate Assembly Location & Change in Assembly Materials

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 ASECL, Taiwan; ASEK, Taiwan and Carsem (S site), Malaysia as alternate assembly facilities for parts that are currently assembled at UTL, Thailand.

The material set details of the current and alternate assembly location is as shown in Table 1.

There is no change to the moisture performance.

	Existing	Alternate	
VFQFPN-10, 24, 48			
Assembly Location	UTL, Thailand	ASECL, Taiwan	
Die Attach	8200T / 8600	EN4900G	
Bond Wire	Gold Wire, Copper Wire	Copper Wire	
Mold Compound	G700 / G770HCD	G700LA	
VFQFPN-20, 24, 28 (stack dies product)			
Assembly Location	UTL, Thailand	ASEK, Taiwan	
Die Attach	8200T / HR-5104-25	EN4900F / NEX-130SX	
Bond Wire	Gold Wire	Copper Wire	
Mold Compound	G770HCD	G631H	
VFQFPN-32, 40, 48, 64			
Assembly Location	UTL, Thailand	ASEK, Taiwan	
Die Attach	8600	EN4900F	
Bond Wire	Gold Wire	Copper Wire	
Mold Compound	G770HCD	G631H	
VFQFPN-16			
Assembly Location	UTL, Thailand	ASEK, Taiwan	CRSS, Malaysia
Die Attach	8600 / 8008HT ¹ / 8200T ²	EN4900F	QMI519 ²
Bond Wire	Gold Wire, Copper Wire ^{1/2}	Copper Wire	Copper Wire ²
Mold Compound	G770HCD	G631H / G700LA ¹	G770HCD ²

¹ For device F225x

² For device 8T73S1802 / 8P34S2102



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ATTACHMENT 1 - PCN # : A1809-04

Qualification Information and Qualification Data:

Assembly Material: Shown on page 2 of this attachment.
Qual Plan & Results: Tests are in accordance with JEDEC47 recommended tests.

Affected Packages: VFQFPN-48
Qualification Vehicle: VFQFPN-72
Assembly Location: ASECL, Taiwan

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 (110 °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
Ball Shear Test	JESD22-B116	0/5	0/5	0/5
Bond Pull Test	IDT Spec MAC-3010	0/5	0/5	0/5
X Ray	IDT Spec. MAC-3012	0/45	0/45	0/45
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

Affected Packages: VFQFPN-10, 24
Qualification Vehicle: VFQFPN-36
Assembly Location: ASECL, Taiwan

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 (110 °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
Ball Shear Test	JESD22-B116	0/5	0/5	0/5
Bond Pull Test	IDT Spec MAC-3010	0/5	0/5	0/5
X Ray	IDT Spec. MAC-3012	0/45	0/45	0/45
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 1, 260 °C	0/25	0/25	0/25

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



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ATTACHMENT 1 - PCN # : A1809-04

Affected Packages: VFQFPN-20, 24, 28 (stack dies products)
Qualification Vehicle: VFQFPN-28
Assembly Location: ASEK, Taiwan

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
Ball Shear Test	JESD22-B116	0/5	0/5	0/5
Bond Pull Test	IDT Spec MAC-3010	0/5	0/5	0/5
X Ray	IDT Spec. MAC-3012	0/45	0/45	0/45
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 1, 260 °C	0/25	0/25	0/25

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

Affected Packages: VFQFPN-32, 40, 48, 64
Qualification Vehicle: VFQFPN-72
Assembly Location: ASEK, Taiwan

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
Ball Shear Test	JESD22-B116	0/5	0/5	0/5
Bond Pull Test	IDT Spec MAC-3010	0/5	0/5	0/5
X Ray	IDT Spec. MAC-3012	0/45	0/45	0/45
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



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ATTACHMENT 1 - PCN # : A1809-04

Affected Packages: VFQFPN-16
Qualification Vehicle: VFQFPN-24
Assembly Location: ASEK, Taiwan

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
Ball Shear Test	JESD22-B116	0/5	0/5	0/5
Bond Pull Test	IDT Spec MAC-3010	0/5	0/5	0/5
X Ray	IDT Spec. MAC-3012	0/45	0/45	0/45
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 1, 260 °C	0/25	0/25	0/25

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

Affected Packages: VFQFPN-16
Qualification Vehicle: VFQFPN-16
Assembly Location: Carsen S, Malaysia

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
Ball Shear Test	JESD22-B116	0/5	0/5	0/5
Bond Pull Test	IDT Spec MAC-3010	0/5	0/5	0/5
X Ray	IDT Spec. MAC-3012	0/45	0/45	0/45
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



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ATTACHMENT 2 - PCN # : A1809-04

Affected Part Number

Part Number	Part Number	Part Number	Part Number
5P49EE502-013NDGI	5V49EE503-085NLGI8	5V49EE703-108NDGI8	5V49EE903NLGI
5P49EE502-013NDGI8	5V49EE503-099NLG8	5V49EE703-109NDGI	5V49EE903NLGI8
5P49EE502-015NDGI8	5V49EE503-105NLGI	5V49EE703-109NDGI8	5V49EE904-032NLGI
5P49EE502-128NDG8	5V49EE503-105NLGI8	5V49EE703-132NDGI	5V49EE904-032NLGI8
5P49EE502-130NDGI8	5V49EE503-123NLGI	5V49EE703-132NDGI8	5V49EE904-074NLGI
5P49EE502-136NDG	5V49EE503-123NLGI8	5V49EE703-134NDGI8	5V49EE904-074NLGI8
5P49EE502-136NDG8	5V49EE503-125NLGI8	5V49EE703-135NDGI	5V49EE904-164NLGI
5P49EE502-164NDGI	5V49EE503-127NLGI	5V49EE703-135NDGI8	5V49EE904-164NLGI8
5P49EE502-164NDGI8	5V49EE503-127NLGI8	5V49EE703NDGI	5V49EE904-168NLGI
5P49EE502NDGI	5V49EE503-139NLG8	5V49EE703NDGI8	5V49EE904-168NLGI8
5P49EE502NDGI8	5V49EE503-144NLG	5V49EE704-131NDGI	5V49EE904NLGI
5V19EE403-003NLGI	5V49EE503-144NLG8	5V49EE704-131NDGI8	5V49EE904NLGI8
5V19EE403-003NLGI8	5V49EE503-162NLG8	5V49EE704-170NDGI	6P40286NBGI8
5V19EE403NLGI	5V49EE503-166NLGI8	5V49EE704-170NDGI8	6V40088DNBGI
5V19EE403NLGI8	5V49EE503-187NLGI	5V49EE704NDGI	6V40088DNBGI8
5V19EE902NLGI	5V49EE503-187NLGI8	5V49EE704NDGI8	6V40088ENBGI
5V19EE902NLGI8	5V49EE503-205NLG	5V49EE901-001NLGI8	6V40088ENBGI8
5V19EE903NLGI	5V49EE503-205NLG8	5V49EE901-002NLGI	6V41265NLG8
5V19EE903NLGI8	5V49EE503-206NLG8	5V49EE901-002NLGI8	6V41337ANLG
5V2305NRGI	5V49EE503-207NLG	5V49EE901-035NLG8	6V41337ANLG8
5V2305NRGI8	5V49EE503-207NLG8	5V49EE901-078NLG8	6V49205CNLGI
5V49EE501-063NLGI	5V49EE503-208NLG	5V49EE901-088NLGI	6V49205CNLGI8
5V49EE501-063NLGI8	5V49EE503-208NLG8	5V49EE901-088NLGI8	849N212CKI-005LF
5V49EE501-094NLGI	5V49EE503-212NLG8	5V49EE901-113NLG	849N212CKI-005LFT
5V49EE501-094NLGI8	5V49EE503-221NLG8	5V49EE901-113NLG8	849N212CKI-006LF
5V49EE501-095NLGI	5V49EE503NLGI	5V49EE901-124NLGI	849N212CKI-006LFT
5V49EE501-095NLGI8	5V49EE503NLGI8	5V49EE901-124NLGI8	849N212CKI-007LF
5V49EE501-117NLGI	5V49EE504-171NLGI8	5V49EE901-128NLGI8	849N212CKI-007LFT
5V49EE501-117NLGI8	5V49EE504-175NLGI	5V49EE901-158NLGI	849N212CKI-999LF
5V49EE501-118NLGI	5V49EE504-175NLGI8	5V49EE901-158NLGI8	849N212CKI-999LFT
5V49EE501-118NLGI8	5V49EE504NLGI	5V49EE901-212NLGI	8P34S2102NLGI
5V49EE501-127NLGI	5V49EE504NLGI8	5V49EE901-212NLGI8	8P34S2102NLGI8
5V49EE501-127NLGI8	5V49EE701NDGI	5V49EE901NLGI	8SLVD1212NLGI
5V49EE501NLGI	5V49EE701NDGI8	5V49EE901NLGI8	8SLVD1212NLGI/W
5V49EE501NLGI8	5V49EE702-097NDGI8	5V49EE902-047NLGI	8SLVD1212NLGI8
5V49EE502-129NLGI	5V49EE702NDGI	5V49EE902-047NLGI8	8T73S1802NLGI
5V49EE502-129NLGI8	5V49EE702NDGI8	5V49EE902-061NLGI	8T73S1802NLGI/W
5V49EE502NLGI	5V49EE703-030NDGI	5V49EE902-061NLGI8	8T73S1802NLGI8
5V49EE502NLGI8	5V49EE703-030NDGI8	5V49EE902-091NLGI8	9277BNLG8
5V49EE503-023NLGI	5V49EE703-038NDGI	5V49EE902-121NLGI	F2250NLGK
5V49EE503-023NLGI8	5V49EE703-038NDGI8	5V49EE902-121NLGI8	F2250NLGK8
5V49EE503-027NLGI8	5V49EE703-082NDGI	5V49EE902-252NLGI	F2255NLGK
5V49EE503-046NLGI	5V49EE703-082NDGI8	5V49EE902-252NLGI8	F2255NLGK8
5V49EE503-046NLGI8	5V49EE703-083NDGI	5V49EE902NLGI	F2258NLGK
5V49EE503-055NLGI8	5V49EE703-083NDGI8	5V49EE902NLGI8	F2258NLGK8
5V49EE503-068NLGI	5V49EE703-084NDGI	5V49EE903-111NLGI	F2914NBGK
5V49EE503-068NLGI8	5V49EE703-084NDGI8	5V49EE903-111NLGI8	F2914NBGK8
5V49EE503-073NLGI	5V49EE703-086NDGI	5V49EE903-116NLGI8	F2915NBGK
5V49EE503-073NLGI8	5V49EE703-086NDGI8	5V49EE903-200NLGI	F2915NBGK8
5V49EE503-085NLGI	5V49EE703-108NDGI	5V49EE903-200NLGI8	