



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

PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: **A1808-01** Date: August 29, 2018
Product Affected: QSOP-20, 24, 28
TSSOP-48, 56
PDIP-28
Date Effective: November 29, 2018

MEANS OF DISTINGUISHING CHANGED DEVICES:

- | | |
|--|----------------------------------|
| ☒ Product Mark | Lot # will have following prefix |
| ☐ Back Mark | "GR" denote Greatek, Taiwan |
| ☐ Date Code | "MM" denote Carsem, Malaysia |
| ☐ Other | "A" denote OSE, Taiwan |

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 transferring assembly location of select packages from Amkor Philippines to Carsem, Malaysia; Greatek, Taiwan and OSE, Taiwan as a result of Amkor discontinuing the assembly process of these packages.

Carsem, Greatek and OSE are the current qualified IDT Subcontractors.

Refer to Attachment 1 for the qualification summary and material set details. Attachment 2 is the list of affected products.

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: _____



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ATTACHMENT 1 - PCN # : A1808-01

PCN Type: Change of Assembly Location & Assembly Material Sets

Data Sheet Change: N/A

Detail Of Change:

This notification is to advise our customers that IDT is transferring assembly location of select packages from Amkor Philippines to Carsem, Malaysia; Greatek, Taiwan and OSE, Taiwan as a result of Amkor discontinuing the assembly process of these packages.

Carsem, Greatek and OSE are the current qualified IDT Subcontractors.

There is no change in form, fit and function of the products including RoHS compliance and MSL rating.

	From	To	
QSOP-20, 24, 28			
Assembly Location	ATP, Philippines	Carsem, Malaysia	Greatek, Taiwan
Die Attach	Ablestik 8290	84-1 LMI SR4	Hitachi EN4900GC
Bond Wire	Gold Wire, Copper Wire	Gold Wire, Copper Wire	Gold Wire, Copper Wire
Mold Compound	EME-G600	CEL8240HF10LXC	G700H
TSSOP-48, 56			
Assembly Location	ATP, Philippines	OSE, Taiwan	Greatek, Taiwan
Die Attach	Ablestik 8290	EN4900GC	CRM-1076DJ-G
Bond Wire	Gold Wire, Copper Wire	Gold Wire, Copper Wire	Gold Wire, Copper Wire
Mold Compound	EME-G700K	CEL-9200HF	G700H
PDIP-28			
Assembly Location	ATP, Philippines	Greatek, Taiwan	
Die Attach	Ablestik 8390A	CRM1076DJ-G	
Bond Wire	Gold Wire	Gold Wire	
Mold Compound	CK5000A	G631	



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ATTACHMENT 1 - PCN # : A1808-01

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: QSOP-20, 24, 28
Qualification Vehicle: QSOP-28
Assembly Location: Carsem, Malaysia

Test Description	Test Method	Test Results (Rej / SS)					
		Gold Wire			Copper Wire		
		Lot 1	Lot 2	Lot 3	Lot 1	Lot 2	Lot 3
* Temperature Cycling (-55°C to 125°C, 700 cycles)	JESD22-A104	0/25	0/25	0/25	0/25	0/25	0/25
* HAST - biased (130 °C/85% RH, 96 Hrs)	JESD22-A110	0/25	0/25	0/25	0/25	0/25	0/25
High Temperature Storage Bake (150°C, 1000 Hrs)	JESD22-A103	0/25	0/25	0/25	0/25	0/25	0/25
Ball Shear Test	JESD22-B116	0/5	0/5	0/5	0/5	0/5	0/5
Bond Pull Test	IDT Spec MAC-3010	0/5	0/5	0/5	0/5	0/5	0/5
X Ray	IDT Spec. MAC-3012	0/45	0/45	0/45	0/45	0/45	0/45
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 1, 260 °C	0/25	0/25	0/25	0/25	0/25	0/25

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

Affected Packages: QSOP-20, 24, 28
Qualification Vehicle: QSOP-28
Assembly Location: Greatek, Taiwan

Test Description	Test Method	Test Results (Rej / SS)					
		Gold Wire			Copper Wire		
		Lot 1	Lot 2	Lot 3	Lot 1	Lot 2	Lot 3
* Temperature Cycling (-55°C to 125°C, 700 cycles)	JESD22-A104	0/25	0/25	0/25	0/25	0/25	0/25
* HAST - biased (130 °C/85% RH, 96 Hrs)	JESD22-A110	0/25	0/25	0/25	0/25	0/25	0/25
High Temperature Storage Bake (150°C, 1000 Hrs)	JESD22-A103	0/25	0/25	0/25	0/25	0/25	0/25
Ball Shear Test	JESD22-B116	0/5	0/5	0/5	0/5	0/5	0/5
Bond Pull Test	IDT Spec MAC-3010	0/5	0/5	0/5	0/5	0/5	0/5
X Ray	IDT Spec. MAC-3012	0/45	0/45	0/45	0/45	0/45	0/45
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 1, 260 °C	0/25	0/25	0/25	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 # : A1808-01

Affected Packages: TSSOP-48, 56
Qualification Vehicle: TSSOP-56
Assembly Location: OSE, Taiwan

Test Description	Test Method	Test Results (Rej / SS)					
		Gold Wire			Copper Wire		
		Lot 1	Lot 2	Lot 3	Lot 1	Lot 2	Lot 3
* Temperature Cycling (-55°C to 125°C, 700 cycles)	JESD22-A104	0/25	0/25	0/25	0/25	0/25	0/25
* HAST - biased (130 °C/85% RH, 96 Hrs)	JESD22-A110	0/25	0/25	0/25	0/25	0/25	0/25
High Temperature Storage Bake (150°C, 1000 Hrs)	JESD22-A103	0/25	0/25	0/25	0/25	0/25	0/25
Ball Shear Test	JESD22-B116	0/5	0/5	0/5	0/5	0/5	0/5
Bond Pull Test	IDT Spec MAC-3010	0/5	0/5	0/5	0/5	0/5	0/5
X Ray	IDT Spec. MAC-3012	0/45	0/45	0/45	0/45	0/45	0/45
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 1, 260 °C	0/25	0/25	0/25	0/25	0/25	0/25

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

Affected Packages: TSSOP-48, 56
Qualification Vehicle: TSSOP-64
Assembly Location: Greatek, Taiwan

Test Description	Test Method	Test Results (Rej / SS)					
		Gold Wire			Copper Wire		
		Lot 1	Lot 2	Lot 3	Lot 1	Lot 2	Lot 3
* Temperature Cycling (-55°C to 125°C, 700 cycles)	JESD22-A104	0/25	0/25	0/25	0/25	0/25	0/25
* HAST - biased (130 °C/85% RH, 96 Hrs)	JESD22-A110	0/25	0/25	0/25	0/25	0/25	0/25
High Temperature Storage Bake (150°C, 1000 Hrs)	JESD22-A103	0/25	0/25	0/25	0/25	0/25	0/25
Ball Shear Test	JESD22-B116	0/5	0/5	0/5	0/5	0/5	0/5
Bond Pull Test	IDT Spec MAC-3010	0/5	0/5	0/5	0/5	0/5	0/5
X Ray	IDT Spec. MAC-3012	0/45	0/45	0/45	0/45	0/45	0/45
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 1, 260 °C	0/25	0/25	0/25	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 # : A1808-01

Affected Packages: PDIP-28
Qualification Vehicle: PDIP-48
Assembly Location: Greatek, Taiwan

Test Description	Test Method	Test Results (Rej / SS)		
		Gold Wire		
		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

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



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ATTACHMENT 2 - PCN # : A1808-01

Affected Part Number

Part Number	Part Number	Part Number	Part Number
1493EG-18LF	49FCT3805BQG	650R-21ILF	7284L15PAGI8
1493EG-18LFT	49FCT3805BQGG8	650R-21ILFT	7285L12PAG
308RILF	49FCT3805BQGI	650R-21LF	7285L12PAG8
308RILFT	49FCT3805BQGI8	650R-21LFT	7285L15PAGI
308RLF	49FCT3805DQGI	650R-27ILF	7285L15PAGI8
308RLFT	49FCT3805DQGI8	650R-27ILFT	72V81L15PAG
309RILF	49FCT3805EQGI	674R-01ILF	72V81L15PAG8
309RILFT	49FCT3805EQGI8	674R-01ILFT	72V81L20PAG
309RLF	49FCT3805QGG	674R-01LF	72V81L20PAG8
309RLFT	49FCT3805QGG8	674R-01LFT	72V82L15PAG
345R-60LF	49FCT3805QGI	6V49061APAG	72V82L15PAG5
345R-60LFT	49FCT3805QGI8	6V49061APAG8	72V82L15PAG8
345R-62LF	49FCT805BTQG	6V49122PAG	72V82L20PAGI
345R-62LFT	49FCT805BTQGG8	6V49122PAG8	72V82L20PAGI8
345R-65LF	49FCT805CTQG	7201LA15PDG	72V83L15PAG
345R-65LFT	49FCT805CTQGG8	7201LA20PDG	72V83L15PAG8
345R-71LF	49FCT805SQGI	7201LA25PDG	72V83L20PAGI
345R-71LFT	49FCT805SQGI8	7202LA15PDG	72V83L20PAGI8
345RI-02LF	525-01RILF	7280L10PAG	72V84L12PAG
345RI-02LFT	525-01RILFT	7280L10PAG8	72V84L12PAG8
345RI-13LF	525-01RLF	7280L12PAG	72V84L15PAG
345RI-13LFT	525-01RLFT	7280L12PAG8	72V84L15PAG8
345RIPLF	525R-02ILF	7281L12PAG	72V84L20PAG
345RIPLFT	525R-02ILFT	7281L12PAG8	72V84L20PAG8
345RPLF	525R-02LF	7281L15PAGI	72V85L15PAG
345RPLFT	525R-02LFT	7281L15PAGI8	72V85L15PAG8
348RIPLF	525R-03ILF	7282L12PAG	74CBTLV3244QGG
348RIPLFT	525R-03ILFT	7282L12PAG5	74CBTLV3244QGG8
348RPLF	527R-01ILF	7282L12PAG8	74CBTLV3245QGG
348RPLFT	527R-01ILFT	7282L15PAG	74CBTLV3245QGG8
445R-34LF	527R-01LF	7282L15PAG8	74CBTLV3384QGG
445R-34LFT	527R-01LFT	7282L15PAGI	74CBTLV3384QGG8
445R-57LF	552AR-01LF	7282L15PAGI8	74CBTLV3861QGG
445R-57LFT	552AR-01LFT	7282L20PAG	74CBTLV3861QGG8
445R-58LF	552ARI-01LF	7282L20PAG8	74CBTLV3862QGG
445R-58LFT	552ARI-01LFT	7282L20PAGI	74CBTLV3862QGG8
445R-61LF	552R-01ILF	7282L20PAGI8	74CBTLV6800QGG
445R-61LFT	552R-01ILFT	7283L12PAG	74CBTLV6800QGG8
455R-31LF	552R-01LN	7283L12PAG8	74FCT20807QGI
455R-31LFT	552R-01LNT	7283L12PAGI	74FCT20807QGI8
49FCT20805QGI	650R-01ILF	7283L12PAGI8	74FCT2244ATQGG
49FCT20805QGI8	650R-01ILFT	7283L15PAG	74FCT2244ATQGG8
49FCT3805AQQ	650R-01LF	7283L15PAG8	74FCT2244CTQGG
49FCT3805AQQG8	650R-01LFT	7283L15PAGI	74FCT2244CTQGG8
49FCT3805AQGI	650R-07LF	7283L15PAGI8	74FCT2245ATQGG
49FCT3805AQGI8	650R-07LFT	7283L20PAG	74FCT2245ATQGG8
49FCT3805BAQQ	650R-11ILF	7283L20PAG8	74FCT2245CTQGG
49FCT3805BAQQG8	650R-11ILFT	7284L12PAG	74FCT2245CTQGG8
49FCT3805BAQGI	650R-14ILF	7284L12PAG8	74FCT2373ATQGG
49FCT3805BAQGI8	650R-14ILFT	7284L15PAGI	74FCT2373ATQGG8



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ATTACHMENT 2 - PCN # : A1808-01

Affected Part Number

Part Number	Part Number	Part Number	Part Number
74FCT2373CTQG	74FCT3807QG	83115BRILF	QS32390QG
74FCT2373CTQG8	74FCT3807QG8	83115BRILFT	QS32390QG8
74FCT240ATQG	74FCT3807QGI	83115BRLF	QS3244QG
74FCT240ATQG8	74FCT3807QGI8	83115BRLFT	QS3244QG8
74FCT240CTQG	74FCT3807SQGI	843204AGILF	QS3245QG
74FCT240CTQG8	74FCT3807SQGI8	843204AGILFT	QS3245QG8
74FCT244ATQG	74FCT521ATQG	870919BRI-01LF	QS3383QG
74FCT244ATQG8	74FCT521ATQG8	870919BRI-01LFT	QS3383QG8
74FCT244CTQG	74FCT521CTQG	870919BRILF	QS3384QG
74FCT244CTQG8	74FCT521CTQG8	870919BRILFT	QS3384QG5
74FCT245ATQG	74FCT540ATQG	870931ARI-01LF	QS3384QG8
74FCT245ATQG8	74FCT540ATQG8	870931ARI-01LFT	QS3390QG
74FCT245CTQG	74FCT540CTQG	8V40817QG	QS3390QG8
74FCT245CTQG8	74FCT540CTQG8	8V40817QG8	QS3861QG
74FCT3244AQQ	74FCT543ATQG	9263AGLF	QS3861QG8
74FCT3244AQQ8	74FCT543ATQG8	9263AGLFT	QS3L384QG
74FCT3244QG	74FCT543CTQG	954227BGLF	QS3L384QG8
74FCT3244QG8	74FCT543CTQG8	954227BGLFT	QS3VH2245QG
74FCT3245AQQ	74FCT543DTQG	9DB102BFILF	QS3VH2245QG8
74FCT3245AQQ8	74FCT543DTQG8	9DB102BFILFT	QS3VH244QG
74FCT3245QG	74FCT573ATQG	9DB102BFLF	QS3VH244QG8
74FCT3245QG8	74FCT573ATQG8	9DB102BFLFT	QS3VH245QG
74FCT373ATQG	74FCT573CTQG	9DB233AFILF	QS3VH245QG8
74FCT373ATQG8	74FCT573CTQG8	9DB233AFILFT	QS3VH2861QG
74FCT373CTQG	74FCT574ATQG	9DB233AFLF	QS3VH2861QG8
74FCT373CTQG8	74FCT574ATQG8	9DB233AFLFT	QS3VH384QG
74FCT374ATQG	74FCT574CTQG	9UM709BGILF	QS3VH384QG8
74FCT374ATQG8	74FCT574CTQG8	9UM709BGILFT	QS3VH861QG
74FCT374CTQG	74FCT807BTQG	9UM709BGLF	QS3VH861QG8
74FCT374CTQG8	74FCT807BTQG8	9UM709BGLFT	QS3VH862QG
74FCT3807AQQ	74FCT807BTQGI	LV810RILF	QS3VH862QG8
74FCT3807AQQ8	74FCT807BTQGI8	LV810RILFT	QS4A105QG
74FCT3807AQGI	74FCT807CTQG	MK74CB218BRLF	QS4A105QG8
74FCT3807AQGI8	74FCT807CTQG8	MK74CB218BRLFTR	QS4A110QG
74FCT3807DQGI	74FCT807CTQGI	MK74CB218RILF	QS4A110QG8
74FCT3807DQGI8	74FCT807CTQGI8	MK74CB218RLFTR	QS4A201QG
74FCT3807EQGI	74FST6800QG	QS32245QG	QS4A201QG8
74FCT3807EQGI8	74FST6800QG8	QS32245QG8	