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

PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: **A1908-02** DATE: **17-Sep-2019**

Product Affected: SOIC-28, QVSOP-48/80, SSOP-48/56
(Refer to Attachment II for the affected part#)

Date Effective: **17-Dec-2019**

MEANS OF DISTINGUISHING CHANGED DEVICES:

- ☐ Product Mark
- ■ Back Mark
- ☐ Date Code
- ☐ Other

Lot # will have:
"S" prefix for SPEL, India
"GR" prefix for Greatek, Taiwan

Contact: IDT PCN DESK

E-mail: idt-pcn@lm.renesas.com

Attachment: ■ Yes ☐ No

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 - MSL Rating

This notification is to advise our customers that IDT is adding SPEL, India and Greatek, Taiwan as the qualified assembly facilities as one of the existing assembly facility, OSET has discontinued the packages.

There is change to the moisture performance on package QVSOP-48/80 and SSOP-48/56 from MSL1 to MSL 3.

Attachment I details the qualification results.
Attachment II lists the affected part numbers.

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: _____ ☐ ***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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PRODUCT/PROCESS CHANGE NOTICE (PCN)

ATTACHMENT I - PCN # : A1908-02

PCN Type: Change of Assembly Location, Material Sets and MSL Rating

Data Sheet Change: None

Change in moisture sensitivity level (MSL)

Detail Of Change:

This notification is to advise our customers that IDT is adding SPEL, India and Greatek, Taiwan as the qualified assembly facilities as one of the existing assembly facility, OSET has discontinued the packages.

The material set details of the current and newly added assembly locations are as shown in Table 1. There will be no change in wire type as a result of this PCN. Customers receiving products assembled in Gold wire or Copper wire will continue to receive Gold wire parts or Copper wire parts assembled in the new assembly locations.

There is change to the moisture performance on package QVSOP-48/80 and SSOP-48/56 from MSL1 to MSL 3.

Table 1: Assembly Material Sets for The Existing and Newly added Assembly Locations

SOIC-28	**Existing Assembly**	**New Assembly**
Material Set / Assembly	OSET - OSE, Taiwan	Greatek, Taiwan
Die Attach	CRM-1076WA	CRM-1076DJ-G
Bonding Wire	Gold wire	Gold wire, Copper wire
Mold Compound	G631	G600F

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QVSOP-48/80	Existing Assembly	New Assembly
Material Set / Assembly	OSET - OSE, Taiwan	SPEL, India
Die Attach	CRM-1076WA	CRM1076NS
Bonding Wire	Copper wire	Copper wire
Mold Compound	G631	EME-G633

SSOP-48/56	Existing Assembly	New Assembly	
Material Set / Assembly	OSET - OSE, Taiwan	Greatek, Taiwan	SPEL, India
Die Attach	EN4900GC	EN4900GC	CRM1076NS
Bonding Wire	Copper wire	Copper wire	Copper wire
Mold Compound	CEL-9220HF, G700L	G700H	EME-G633

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ATTACHMENT I - PCN # : A1908-02

Qualification Information and Qualification Data:

Affected Packages: SOIC-28

Assembly Material: Shown on page 2 of this attachment.

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

Qualification Vehicle: SOIC-28 (Gold wire & Copper wire)

(I) Greatek, Taiwan

Test Description	Test Method	Test Results Gold wire & Copper wire (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, 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-B117	0/5, 0/5	0/5, 0/5	0/5, 0/5
Bond Pull Test	MIL-STD-883 (Method 2011)	0/5, 0/5	0/5, 0/5	0/5, 0/5
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 3, 260 °C	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 I - PCN # : A1908-02

Affected Packages: QVSOP-48/80

Assembly Material: Shown on page 2 of this attachment.

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

Qualification Vehicle: QVSOP-80 (Copper wire)

(I) SPEL, India

Test Description	Test Method	Test Results Copper wire (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-B117	0/5	0/5	0/5
Bond Pull Test	MIL-STD-883 (Method 2011)	0/5	0/5	0/5
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 3, 260 °C	0/25	0/25	-

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

PRODUCT/PROCESS CHANGE NOTICE (PCN)

ATTACHMENT I - PCN # : A1908-02

Affected Packages: SSOP-48/56

Assembly Material: Shown on page 2 of this attachment.

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

Qualification Vehicle: SSOP-56 (Copper wire)

(I) Greatek, Taiwan

Test Description	Test Method	Test Results Copper wire (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-B117	0/5	0/5	0/5
Bond Pull Test	MIL-STD-883 (Method 2011)	0/5	0/5	0/5
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 3, 260 °C	0/25	0/25	-

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

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(II) SPEL, India

Test Description	Test Method	Test Results Copper wire (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-B117	0/5	0/5	0/5
Bond Pull Test	MIL-STD-883 (Method 2011)	0/5	0/5	0/5
Moisture Sensitivity Level, MSL	J-STD-20 / MSL 3, 260 °C	0/25	0/25	-

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

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ATTACHMENT II - PCN # : A1908-02

Affected Part Numbers

Part Number	Part Number	Part Number	Part Number
1893BFILF	7204L15SOGI8	74FCT162823CTPVG	74FCT16952CTPVG
1893BFILFT	72125L25SOG	74FCT162823CTPVG8	74FCT16952CTPVG8
1893BFLF	72125L25SOG8	74FCT162827ATPVG	74FCT16952ETPVG
1893BFLFT	74ALVC164245PVG	74FCT162827ATPVG8	74FCT16952ETPVG8
1893CFLF	74ALVC164245PVG8	74FCT162827CTPVG	74LVC162244APVG
1893CFLFT	74FCT162244ATPVG	74FCT162827CTPVG8	74LVC162244APVG8
7200L12SOG	74FCT162244ATPVG8	74FCT163244APVG	74LVC162245APVG
7200L12SOG8	74FCT162244CTPVG	74FCT163244APVG8	74LVC162245APVG8
7200L15SOG	74FCT162244CTPVG8	74FCT163244CPVG	74LVC16244APVG
7200L15SOG8	74FCT162244ETPVG	74FCT163244CPVG8	74LVC16244APVG8
7200L15SOGI	74FCT162244ETPVG8	74FCT163245APVG	74LVC16245APVG
7200L15SOGI8	74FCT162245ATPVG	74FCT163245APVG8	74LVC16245APVG8
7200L20SOG	74FCT162245ATPVG8	74FCT163245CPVG	74LVC16373APVG
7200L20SOG8	74FCT162245CTPVG	74FCT163245CPVG8	74LVC16373APVG8
7200L25SOG	74FCT162245CTPVG8	74FCT163373APVG	74LVCH16245APVG
7200L35SOG	74FCT162260CTPVG	74FCT163373APVG8	74LVCH16245APVG8
7200L50SOG	74FCT162373ATPVG	74FCT163373CPVG	74LVCH16374APVG
7200L50SOG8	74FCT162373ATPVG8	74FCT163373CPVG8	74LVCH16374APVG8
7201LA12SOG	74FCT162373CTPVG	74FCT163374APVG	82V3001APVG
7201LA12SOG8	74FCT162373CTPVG8	74FCT163374APVG8	82V3001APVG8
7201LA15SOG	74FCT162373ETPVG	74FCT163374CPVG	82V3002APVG
7201LA15SOG8	74FCT162373ETPVG8	74FCT163374CPVG8	82V3002APVG8
7201LA15SOGI	74FCT162374ATPVG	74FCT16373ATPVG	82V3010PVG
7201LA15SOGI8	74FCT162374ATPVG8	74FCT16373ATPVG8	82V3010PVG8
7201LA20SOG	74FCT162374CTPVG	74FCT16373CTPVG	82V3011PVG
7201LA20SOG8	74FCT162374CTPVG8	74FCT16373CTPVG8	82V3011PVG8
7201LA35SOG	74FCT162374ETPVG	74FCT16374ATPVG	82V3012PVG
7201LA35SOG8	74FCT162374ETPVG8	74FCT16374ATPVG8	82V3012PVG8
7201LA50SOG	74FCT16244ATPVG	74FCT16374CTPVG	9248BF-195LF
7201LA50SOG8	74FCT16244ATPVG8	74FCT16374CTPVG8	9248BF-195LFT
7202LA12SOG	74FCT16244CTPVG	74FCT16374ETPVG	950201AFLF
7202LA12SOG8	74FCT16244CTPVG8	74FCT16374ETPVG8	950201AFLFT
7202LA15SOGI	74FCT16245ATPVG	74FCT164245TPVG	950201AFLFT-IN0
7202LA15SOGI8	74FCT16245ATPVG8	74FCT164245TPVG8	952601EFLF
7202LA25SOGI	74FCT16245CTPVG	74FCT16543ATPVG	952601EFLFT
7202LA25SOGI8	74FCT16245CTPVG8	74FCT16543ATPVG8	952601EFLFT-IN0
7202LA50SOG	74FCT16245ETPVG	74FCT16543CTPVG	952906BFLF
7204L12SOG	74FCT16245ETPVG8	74FCT16543CTPVG8	952906BFLFT
7204L12SOG8	74FCT162823ATPVG	74FCT16952ATPVG	952926CFLF
7204L15SOGI	74FCT162823ATPVG8	74FCT16952ATPVG8	952926CFLFT

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Affected Part Numbers

Part Number	Part Number	Part Number	Part Number
953002DFLF	9DB803DFILFT	9FG1200AF-5LF	QS32X861Q1G
953002DFLFT	9DB803DFLF	9FG1200AF-5LFT	QS32X861Q1G8
953008BFLF	9DB803DFLF-INT	9FG830AFILF	QS32XVH384Q1G
953008BFLFT	9DB803DFLF-SUN	9FG830AFILFT	QS32XVH384Q1G8
954101DFLF	9DB803DFLFT	9FG830AFLF	QS33X257Q1G
954101DFLFT	9DB803DFLFT-INT	9FG830AFLFT	QS33X257Q1G8
954119DFLF	9DB803DFLFT-SUN	9LP505-2HFLF	QS34X2245Q3G
954119DFLFT	9DB833AFILF	9LP505-2HFLFT	QS34X2245Q3G8
954120EFLF	9DB833AFILFT	9LP525BF-2LF	QS34X245Q3G
954120EFLFT	9DB833AFLF	9LP525BF-2LFT	QS34X245Q3G8
954128AFLF	9DB833AFLFT	9P960AFLF	QS34X383Q3G
954128AFLFT	9E4101AFILF	9P960AFLFT	QS34X383Q3G8
954141CFLF	9E4101AFILFT	9UMS9633BFILF	QS34XVH2245Q3G
954141CFLFT	9EMS9633BFILF	9UMS9633BFILFT	QS34XVH2245Q3G8
954201BFLF	9EMS9633BFILFT	LDS6120PVGI	QS34XVH245Q3G
954201BFLFT	9EMS9633BFLF	LDS6120PVGI8	QS34XVH245Q3G8
9DB108BFLF	9EMS9633BFLFT	QS32X2384Q1G	QS4A215Q1G
9DB108BFLFT	9FG108EFILF	QS32X2384Q1G8	QS4A215Q1G8
9DB801CFLF-INT	9FG108EFILFT	QS32X384Q1G	
9DB801CFLFT-INT	9FG108EFLF	QS32X384Q1G5	
9DB803DFILF	9FG108EFLFT	QS32X384Q1G8	