



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

PRODUCT/PROCESS CHANGE NOTICE (PCN)

| | | |
|---|---|---|
| PCN #: A1905-01 | DATE: 11-Jun-2019 | MEANS OF DISTINGUISHING CHANGED DEVICES: |
| Product Affected: QSOP-16 (Refer to Attachment II for the affected part#) | | <input type="checkbox"/> Product Mark Lot # will have: <input checked="" type="checkbox"/> Back Mark "MM" prefix for Carsem, Malaysia (M site) <input type="checkbox"/> Date Code <input type="checkbox"/> Other |
| Date Effective: 11-Sep-2019 | | |
| Contact: IDT PCN DESK | Attachment: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| E-mail: pcndesk@idt.com | Samples: Please contact your local sales representative for sample request. | |

DESCRIPTION AND PURPOSE OF CHANGE:

- | | |
|--|--|
| <input type="checkbox"/> Die Technology | |
| <input type="checkbox"/> Wafer Fabrication Process | This notification is to advise our customers that IDT is adding Carsem, Malaysia (M site) as an alternate assembly facility as one of the existing assembly facility, OSET has discontinued the package. |
| <input type="checkbox"/> Assembly Process | |
| <input type="checkbox"/> Equipment | |
| <input checked="" type="checkbox"/> Material | There is no change to the moisture performance. |
| <input type="checkbox"/> Testing | |
| <input checked="" type="checkbox"/> Manufacturing Site | Attachment I details the qualification results. |
| <input type="checkbox"/> Data Sheet | Attachment II lists the affected part numbers. |
| <input type="checkbox"/> Other | |

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"/> 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 I - PCN # : A1905-01

PCN Type: Alternate Assembly Location & Change of Material Sets

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 Carsem, Malaysia (M site) as an alternate assembly facility as one of the existing assembly facility, OSET has discontinued the package.

The material set details of the current and alternate assembly location is 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 will continue to receive Gold wire parts and vice versa except for some select part numbers as stated below.

There is no change to the moisture performance rating but the material declaration will differ.

Table 1: Assembly Material Sets for The Existing and Alternate Assembly Location

| Material Set / Assembly | Existing | | Future | |
|-------------------------|--------------------------|--------------------|--------------------------|----------------------------------|
| | ATP - Amkor, Philippines | OSET - OSE, Taiwan | ATP - Amkor, Philippines | CRSM - Carsem, Malaysia (M site) |
| Die Attach | Ablestik 8290 | EN4900GC | Ablestik 8290 | 84-1 LMI SR4 |
| Bonding Wire | Gold wire, Copper wire | Gold wire | Gold wire, Copper wire | Gold wire, Copper wire* |
| Mold Compound | EME-G600 | CEL-9220HF | EME-G600 | CEL-8240HF |

* Copper wire for part# 9112BF-17LF(T)

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ATTACHMENT I - PCN # : A1905-01

Qualification Information and Qualification Data:

Affected Packages: QSOP-16

Assembly Material: Shown on page 2 of this attachment.

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

Qualification Vehicle: QSOP-20 (Gold wire) & QSOP-28 (Copper wire)

| 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 |
| X-Ray Examination | IDT Spec. MAC-3012 | 45/5, 45/5 | 45/5, 45/5 | 45/5, 45/5 |
| 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 1, 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 # : A1905-01

Affected Part Numbers

| Part Number | Part Number | Part Number | Part Number |
|----------------|--------------|-------------|-------------|
| 74CBTLV3125QG | 9112BF-17LFT | QS3257QG | QS3VH253QG8 |
| 74CBTLV3125QG8 | QS3125QG | QS3257QG8 | QS3VH257QG |
| 74CBTLV3251QG | QS3125QG8 | QS3VH125QG | QS3VH257QG8 |
| 74CBTLV3251QG8 | QS3126QG | QS3VH125QG8 | QS4A101QG |
| 74CBTLV3253QG | QS3126QG8 | QS3VH126QG | QS4A101QG8 |
| 74CBTLV3253QG8 | QS3251QG | QS3VH126QG8 | QS4A205QG |
| 74CBTLV3257QG | QS3251QG8 | QS3VH251QG | QS4A205QG8 |
| 74CBTLV3257QG8 | QS3253QG | QS3VH251QG8 | QS4A210QG |
| 9112BF-17LF | QS3253QG8 | QS3VH253QG | QS4A210QG8 |