



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

PRODUCT/PROCESS CHANGE NOTICE (PCN)

| | | |
|--|---|---|
| PCN #: A1902-01 | DATE: 12-Mar-2019 | MEANS OF DISTINGUISHING CHANGED DEVICES: <input type="checkbox"/> Product Mark Lot # will have: <input checked="" type="checkbox"/> Back Mark "RC" prefix for ASECL, Taiwan <input type="checkbox"/> Date Code "B" prefix for SCK, Korea <input type="checkbox"/> Other and substrate material used is traceable from lot# |
| Product Affected: 4DB0226KB0AVG 4DB0226KB0AVG8 4DB0226KB0AVG/M 4DB0226KB0AVG8/M | Date Effective: 12-Jun-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 ASECL as an alternate assembly and add UMTC as alternate substrate at the existing assembly STATS ChipPAC Korea (SCK). |
| <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 | |
| <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"/> <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: _____



PRODUCT/PROCESS CHANGE NOTICE (PCN)

ATTACHMENT I - PCN # : A1902-01

PCN Type: Manufacturing Site - Alternate Assembly Location & Alternate 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 ASECL as an alternate assembly and add UMTC as alternate substrate at the existing assembly STATS ChipPAC Korea (SCK).

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.

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

| | Existing Assembly (ASEK, Taiwan) | Existing Assembly (SCK, Korea) | Alternate Assembly (ASECL, Taiwan) | Alternate Substrate (SCK, Korea) |
|---------------|---|---|---|---|
| Die Bump | Cu/Ni/SnAg1.8 (40/3/27um) | Cu/Ni/SnAg1.8 (40/3/27um) | Cu/Ni/SnAg1.8 (40/3/27um) | Cu/Ni/SnAg1.8 (40/3/27um) |
| Mold Compound | EME-G311A Type C | KEG-1250FC-K | EME-G311A Type C | KEG-1250FC-K |
| Substrate | UMTC HL832NS/AUS410 | Kinsus HL832NS/AUS410 | UMTC HL832NS/AUS410 | UMTC HL832NS/AUS410 |
| Solder Balls | Sn/Ag1.2/Cu0.50/Ni0.05 | Sn/Ag1.2/Cu0.50/Ni0.05 | Sn/Ag1.2/Cu0.50/Ni0.05 | Sn/Ag1.2/Cu0.50/Ni0.05 |



PRODUCT/PROCESS CHANGE NOTICE (PCN)

ATTACHMENT I - PCN # : A1902-01

Qualification Information and Qualification Data:

Affected Packages: FCCSP-53

Assembly Material: Shown on page 2 of this attachment.

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

Qualification Vehicle: FCCSP-53

(I) 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 - unbiased (130 °C/85% RH, 96 Hrs) | JESD22-A108 | 0/25 | 0/25 | 0/25 |
| High Temperature Storage Bake (150°C, 1000 Hrs) | JESD22-A103 | 0/25 | 0/25 | 0/25 |
| 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

(II) SCK, Korea

| 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 - unbiased (130 °C/85% RH, 96 Hrs) | JESD22-A108 | 0/25 | 0/25 | 0/25 |
| High Temperature Storage Bake (150°C, 1000 Hrs) | JESD22-A103 | 0/25 | 0/25 | 0/25 |
| 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