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

# PRODUCT/PROCESS CHANGE NOTICE (PCN)

PCN #: **A1811-01** Date: December 17, 2018

Product Affected: 4MX0121VA13AVG,
4MX0121VA13AVG8,
4MX0121VA13AVG/M,
4MX0121VA13AVG8/M

Date Effective: March 17, 2019

MEANS OF DISTINGUISHING CHANGED DEVICES:

- ☐ Product Mark
- ■ Back Mark Lot # will have a "D" prefix
- ☐ Date Code
- ☐ Date Code
- ☐ Other

Contact: IDT PCN DESK

Attachment: ■ Yes ☐ No

E-mail: pcndesk@idt.com

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

**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 Amkor Korea as an alternate bump location on the above products. In addition, the assembly location will also be transferred from Amkor Philippines to Amkor Korea as a result of Amkor Philippines discontinuing the assembly processes of these products.

Amkor Korea is currently a qualified IDT Subcontractor.

There is no change to the moisture performance rating.

Please refer to Attachment 1 for the qualification summary and material set details.

**RELIABILITY/QUALIFICATION SUMMARY:**

Qualification has been successfully completed. 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 ____________________

## ATTACHMENT 1 - PCN # : A1811-01

**PCN Type:** Add alternate Bump Location & Change Assembly Location & Assembly Material Sets

**Data Sheet Change:** N/A

**Detail Of Change:**

This notification is to advise our customers that IDT is adding Amkor Korea as an alternate bump location on the above products. In addition, the assembly location will also be transferred from Amkor Philippines to Amkor Korea as a result of Amkor Philippines discontinuing the assembly processes of these products.

Amkor Korea is currently a qualified IDT Subcontractor.

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

IDT requests customers to respond to this notice within 30 days, with an indication if samples will be required.
Samples must be placed within 30 days if required for qualification and approval to avoid any disruption in supply.

FCCSP-48: Qualified Material Sets, by Assembly Subcontractor

| | Existing | New |
|---|---|---|
| Die Bump Location | ATT - Amkor, Taiwan | ATT - Amkor, Taiwan and ATK - Amkor, Korea |
| Material Set / Assembly | ATP - Amkor, Philippines | ATK - Amkor, Korea |
| Die Bump | Sn1.8Ag | Sn1.8Ag |
| Underfill Material | MUF-1 | MUF-32 |
| Substrate | NVMUX 4L | NVMUX 4L |
| Solder Balls | Sn96.5/Ag3.0/Cu0.5 | Sn96.5/Ag3.0/Cu0.5 |

## ATTACHMENT 1 - PCN # : A1811-01

**Qualification Information and Qualification Data:**

**Affected Packages:** FCCSP-48

**Assembly Material:** The affected package type is using the respective subcon standard materials as shown on page 1 of this attachment. Qualification testing was completed on the worse case package.

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

**Qualification Vehicle: FCCSP-48** (3 lots)

| Test Description | Test Method | Test Results (Rej/SS) | | |
|---|---|---|---|---|
| | | Lot 1 | Lot 2 | Lot 3 |
| [1] HAST - biased<br>(130 °C/85% RH, 96 Hrs) | JESD22-A110 | 0 / 25 | 0 / 25 | 0 / 25 |
| [1] HAST - unbiased<br>(130 °C/85% RH, 96 Hrs) | JESD22-A118 | 0 / 25 | 0 / 25 | 0 / 25 |
| [1] Temperature Cycling<br>(-55°C to 125°C, 700 cycles) | JESD22-A104 | 0 / 25 | 0 / 25 | 0 / 25 |
| High Temperature Storage Test<br>(150°C, 1000 hours) | JESD22-A103 | 0 / 25 | 0 / 25 | 0 / 25 |

*Notes: 1. HAST and Temperature Cycle were subjected to Preconditioning per JESD22-A113 for MSL 3.*