



Product Change Notification / KSRA-16XDWZ131

Date:

23-Feb-2021

Product Category:

Memory

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4198.002 Final Notice: Qualification of ASSH as a new assembly site for selected 25AA640xx and 25LC640xx device families of 36K wafer technology available in 8L TSSOP package.

Affected CPNs:

[KSRA-16XDWZ131_Affected_CPN_02232021.pdf](#)

[KSRA-16XDWZ131_Affected_CPN_02232021.csv](#)

Notification Text:

PCN Status: Final notification

PCN Type: Manufacturing Change

Microchip Parts Affected: Please open one of the icons found in the Affected CPNs section above.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

Description of Change: Qualification of ASSH as a new assembly site for selected 25AA640xx and 25LC640xx device families of 36K wafer technology available in 8L TSSOP package.

Pre Change:

Assembled at ANAP using gold (Au) bond wire, 8290 die attach material, G700A molding compound material, with Matte tin lead plating finish and using lead frame without lead lock

Assembled at UNIS using gold (Au) bond wire, 8290 die attach material, G600 molding compound material, with Matte tin lead plating finish and using lead frame without lead lock

Assembled at NSEB using gold (Au) bond wire, 2200D die attach material, G600 molding compound material, with Matte tin

lead plating finish and using lead frame with lead lock

Assembled at MMT using gold (Au) bond wire, 2200D die attach material, G600V molding compound material, with Matte tin lead plating finish and using lead frame without lead lock

Post Change:Assembled at ANAP using gold (Au) bond wire, 8290 die attach material, G700A molding compound material, with Matte tin lead plating finish and using lead frame without lead lock

Assembled at UNIS using gold (Au) bond wire, 8290 die attach material, G600 molding compound material, with Matte tin lead plating finish and using lead frame without lead lock

Assembled at NSEB using gold (Au) bond wire, 2200D die attach material, G600 molding compound material, with Matte tin lead plating finish and using lead frame with lead lock

Assembled at MMT using gold (Au) bond wire, 2200D die attach material, G600V molding compound material, with Matte tin lead plating finish and using lead frame without lead lock

Assembled at ASSH using palladium coated copper (PdCu) bond wire, EN-4900GC die attach material, G700LY molding compound material, with PPF lead plating finish and using lead frame with lead lock

Pre and Post Change Summary:

| | Pre Change | | | | Post Change | | | | |
|----------------------------------|---|--|---------------------------------------|-------------------------------------|--|--|---------------------------------------|-------------------------------------|---|
| Assembly Site | Amkor Technology Philippine (P1/P2), INC. / ANAP | Unisem (M) Berhad Perak, Malaysia / UNIS | UTAC Thai Limited (UTL-1) LTD. / NSEB | Microchip Technology Thailand / MMT | Amkor Technology Philippine (P1/P2), INC. / ANAP | Unisem (M) Berhad Perak, Malaysia / UNIS | UTAC Thai Limited (UTL-1) LTD. / NSEB | Microchip Technology Thailand / MMT | ASE Advanced Semiconductor (Shanghai) Co., Ltd / ASSH |
| Wire material | Au | Au | Au | Au | Au | Au | Au | Au | PdCu |
| Die attach material | 8290 | 8290 | 2200D | 2200D | 8290 | 8290 | 2200D | 2200D | EN-4900GC |
| Molding compound material | G700A | G600 | G600 | G600V | G700A | G600 | G600 | G600V | G700LY |
| Lead frame material | C7025 | C7025 | C7025 | C7025 | C7025 | C7025 | C7025 | C7025 | C7025 |
| Lead Plating Finish | Matte tin | Matte tin | Matte tin | Matte tin | Matte tin | Matte tin | Matte tin | Matte tin | PPF |
| Lead frame lead-lock | See Pre and Post Change attachment for lead frame comparison. | | | | | | | | |

Impacts to Data Sheet: None

Change Impact:None

Reason for Change:To improve on-time delivery performance by qualifying ASSH as a new assembly site.

Change Implementation Status:In Progress

Estimated First Ship Date:

March 23, 2021 (date code: 2113)

NOTE: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Time Table Summary:

| | February 2021 | | | | March 2021 | | | | |
|-------------------------------|---------------|----|----|----|------------|----|----|----|----|
| Workweek | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 |
| Qual Report Availability | | | X | | | | | | |
| Final PCN Issue Date | | | X | | | | | | |
| Estimated Implementation Date | | | | | | | | X | |

Method to Identify Change: Traceability code

Qualification Report Please open the attachments included with this PCN labeled as PCN_#_Qual_Report.

Revision History: **February 23, 2021:** Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on March 23, 2021

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachments:

[PCN_KSRA-16XDWZ131_Pre and Post Change Summary.pdf](#)

[PCN_KSRA-16XDWZ131_Qual_Report.pdf](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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CCB 4198.002
Pre and Post Change Summary
PCN #: KSRA-16XDWZ131



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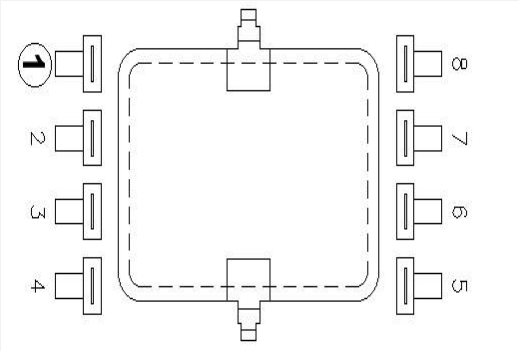
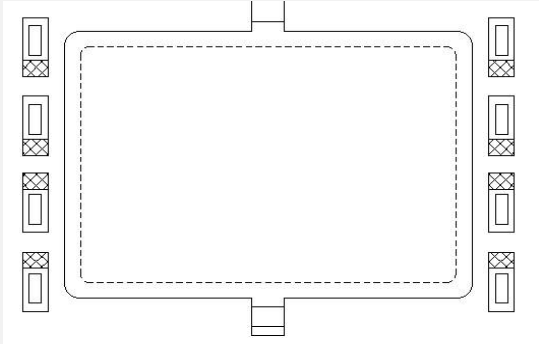


SMART | CONNECTED | SECURE

Lead frame comparison

| ANAP | | UNIS | | NSEB | |
|----------------------|----|----------------------|----|----------------------|-----|
| | | | | | |
| Lead frame lead-lock | No | Lead frame lead-lock | No | Lead frame lead-lock | Yes |

Lead frame comparison

| MMT | ASSH | | | | |
|---|----------------------|----|--|----------------------|-----|
|  <table border="1" data-bbox="180 1247 664 1297"> <tr> <td>Lead frame lead-lock</td> <td>No</td> </tr> </table> | Lead frame lead-lock | No |  <table border="1" data-bbox="948 1247 1432 1297"> <tr> <td>Lead frame lead-lock</td> <td>Yes</td> </tr> </table> | Lead frame lead-lock | Yes |
| Lead frame lead-lock | No | | | | |
| Lead frame lead-lock | Yes | | | | |



MICROCHIP

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN#: KSRA-16XDWZ131

Date

October 30, 2020

**Qualification of ASSH as a new assembly site for selected
25AA640xx and 25LC640xx device families of 36K wafer
technology available in 8L TSSOP package.**



MICROCHIP

PACKAGE QUALIFICATION REPORT

| | |
|----------------------------|--|
| Purpose | Qualification of ASSH as a new assembly site for selected 25AA640xx and 25LC640xx device families of 36K wafer technology available in 8L TSSOP package. |
| CN | ES345370 |
| CCB No | 4198.002 |
| QUAL ID | R2000526 Rev A |
| MP CODE | 3583079CXC03 |
| Part No. | AT24C256C-XHL-B |
| Bonding No. | W35830ayu |
| <u>Package</u> | |
| Type | 8L TSSOP |
| Package size | 4.4 mm |
| <u>Lead Frame</u> | |
| Paddle size | 2.21 x 3.2 mils |
| Material | C7025 |
| Surface | Ru-PPF |
| Process | Stamped |
| Lead Lock | Yes |
| Part Number | LI-WMA400008-05-00 |
| Treatment | Roughened |
| <u>Material</u> | |
| Epoxy | EN-4900GC |
| Wire | PdCu |
| Mold Compound | G700LY |
| Plating Composition | Ru-PPF |



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

| Assembly Lot No. | Wafer Lot No. | Date Code |
|-------------------|-------------------|-----------|
| ASSH184000082.000 | MCSO518384144.000 | 1752USC |
| ASSH204400040.000 | MCSO520177622.000 | 20057CC |
| ASSH204700076.000 | MCSO520167575.000 | 2008CDJ |

Result

Pass Fail _____

8L TSSOP assembled by ASSH pass reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020E standard.

PACKAGE QUALIFICATION REPORT

| Test Number (Reference) | Test Condition | Standard/ Method | Qty. (Acc.) | Def/SS | Result | Remarks |
|---|---|-------------------------------|----------------------|--|------------------|---|
| Moisture/Reflow Sensitivity Classification Test (At MSL Level 1) | 85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020E) | IPC/JEDEC C J-STD- 020E | 135 | 0/135 | Pass | |
| Precondition Prior Perform Reliability Tests (At MSL Level 1) | Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT Bake 150°C, 24 hrs System: CHINEE 85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT | JESD22- A113 | 693(0) | 693 693 693 0/693 | Pass | Good Devices |
| Temp Cycle | Stress Condition: -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H Electrical Test: +85°C and 125°C System: NEXTEST_PT Bond Strength: Wire Pull (>4.00 grams) Bond Shear (>18.00 grams) | JESD22- A104 | 231(0) 45 (0) | 231 0/231 0/45 | Pass Pass | Parts had been pre- conditioned at 260°C |
| HAST | Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.5 Volts System: HAST 6000X Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT Bond Strength: Wire Pull (>4.00 grams) Bond Shear (>18.00 grams) | JESD22- A110 | 231(0) 45 (0) | 231 0/231 0/45 | Pass Pass | Parts had been pre- conditioned at 260°C 77 units / lot |

PACKAGE QUALIFICATION REPORT

| Test Number (Reference) | Test Condition | Standard/ Method | Qty. (Acc.) | Def/SS. | Result | Remarks |
|--|--|-----------------------|----------------|------------------|--------|---|
| UNBIASED-HAST | Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X | JESD22- A118 | | 231 | | Parts had been pre-conditioned at 260°C |
| | Electrical Test: +25°C System: NEXTEST_PT | | 231(0) | 0/231 | Pass | 77 units / lot |
| High Temperature Storage Life | Stress Condition: Bake 175°C, 500 hrs System: TPS DC-166-F-ST350 | JESD22- A103 | | 135 | | 45 units / lot |
| | Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT | | 135(0) | 0/135 | Pass | |
| Solderability Temp 215°C | Steam Aging: Temp 93°C,8Hrs System: SAS-3000 Solder Dipping: Solder Temp.215°C Solder material: SnPb Sn63, Pb37 System: ERSA RA 2200D Visual Inspection: External Visual Inspection | J-STD-002 | 22 (0) | 22 22 0/22 | Pass | |
| Solderability Temp 245°C | Steam Aging: Temp 93°C,8Hrs System: SAS-3000 Solder Dipping:Solder Temp.245°C Solder material:Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection | J-STD-002 | 22 (0) | 22 22 0/22 | Pass | |
| Bond Strength Data Assembly | Wire Pull (> - grams) | Mil.Std. 883- 2011 | 30 (0) | - - | - - | |
| | Bond Shear (> - grams) | CDF-AEC- Q100-001 | 30 (0) | - - | - - | |

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Affected Catalog Part Numbers(CPN)

25AA640A-E/ST
25AA640A-I/ST
25AA640AT-E/ST
25AA640AT-I/ST
25LC640A-E/ST
25LC640A-I/ST
25LC640AT-E/ST
25LC640AT-I/ST