

Product Change Notification - JAON-27SYLL740

Date: 12 Jan 2017
Product Category: Memory
Notification subject: CCB 2743 Final Notice: Qualification of 35.8K process technology for selected products of the 25xx128 and 25xx256 device families available in 8L SOIJ and 8L SOIC packages.
Notification text: **PCN Status:**
Final notification

Microchip Parts Affected:

Please open the attachments found in the attachments field below labeled as PCN_#_Affected_CPN.

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

Description of Change:

Qualification of 35.8K process technology for selected products of the 25xx128 and 25xx256 device families available in 8L SOIJ and 8L SOIC packages.

Pre Change:

Available in 160K wafer technology fabricated at Microchip fabrication sites FAB2 and FAB4 (Tempe, AZ and Gresham, OR, USA) using 8 inch wafers

Post Change:

Available in 160K wafer technology fabricated at Microchip fabrication sites FAB2 and FAB4 (Tempe, AZ and Gresham, OR, USA) using 8 inch wafers or available in 35.8K wafer technology fabricated at FAB 5 (Colorado Springs, CO, USA) using 6 inch wafers

Pre and Post Change Summary:

| | Pre Change | Post Change | |
|------------------------------|---|---|----------------------------------|
| Wafer Technology | 160K wafer technology | 160K wafer technology | 35.8K wafer technology |
| Fabrication Location | Microchip Fabrication Sites FAB 2 and FAB4 (Tempe, AZ and Gresham, OR, USA) | Microchip Fabrication Sites FAB 2 and FAB4 (Tempe, AZ and Gresham, OR, USA) | FAB 5 (Colorado Springs, CO USA) |
| Wafer Diameter | 8 inches (200 mm) | 8 inches (200 mm) | 6 inches (150 mm) |
| Quality certification | ISO/TS16949 | ISO/TS16949 | ISO9001/TS16949 |

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve manufacturability by qualifying an additional fabrication site.

Change Implementation Status:

In Progress

Estimated First Ship Date :
February 13, 2017 (date code: 1707)

NOTE:

In order to receive products only fabricated with the current 160K process please use the revised part number identified with RVA added to the end of the part number (see example below).
Standard Part Number: 25xx128x-x/xx or 25xx256x-x/xx
Revised Part Number (160K only): 25xx128x-x/xxRVA or 25xx256x-xx/xxRVA

Time Table Summary:

| | December 2016 | | | | | January 2017 | | | | February 2017 | | | |
|-------------------------------|---------------|----|----|----|----|--------------|----|----|----|---------------|----|----|----|
| Workweek | 48 | 49 | 50 | 51 | 52 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
| Initial PCN Issue Date | | X | | | | | | | | | | | |
| 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:

December 6, 2016: Issued initial notification.

January 12, 2017: Issued final notification. Attached the qualification report. Provided estimated first ship date to be on February 13, 3017.

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

Attachment(s):

[PCN_JAON-27SYLL740_Qual Report.pdf](#)

[PCN_JAON-27SYLL740_Affected CPN.pdf](#)

[PCN_JAON-27SYLL740_Affected CPN.xls](#)

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

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Affected Catalog Part Numbers (CPN)

| PCN_JAON-27SYLL740 |
|--------------------|
| CATALOG_PART_NBR |
| 25AA256-I/SM |
| 25AA256-I/SN |
| 25AA256T-I/SM |
| 25AA256T-I/SN |
| 25LC256-E/SM |
| 25LC256-E/SN |
| 25LC256-I/SM |
| 25LC256-I/SN |
| 25LC256T-E/SM |
| 25LC256T-E/SN |
| 25LC256T-I/SM |
| 25LC256T-I/SN |
| 25AA128-I/SM |
| 25AA128-I/SN |
| 25AA128T-I/SM |
| 25AA128T-I/SN |
| 25LC128-E/SM |
| 25LC128-E/SN |
| 25LC128-I/SM |
| 25LC128-I/SN |
| 25LC128T-E/SM |
| 25LC128T-E/SN |
| 25LC128T-I/SM |
| 25LC128T-I/SN |



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QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: JAON-27SYLL740

Date
December 23, 2016

**Qualification of 35.8K process technology for selected
products of the 25xx128 and 25xx256 device families
available in 8L SOIJ and 8L SOIC packages**



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PACKAGE QUALIFICATION REPORT

Purpose Qualification of 35.8K process technology for selected products of the 25xx128 and 25xx256 device families available in 8L SOIJ and 8L SOIC packages

CN ES008005

QUAL ID Q16180

MP CODE 358A24C3XA00

Part No. 25LC256-E/SM

Bonding No. BDE-003952 Rev. 01

CCB No. 2743

Package

Type 8L SOIJ

Package size 208 mils

Die thickness 15 mils

Die size 57.10 x 69.50 mils

Lead Frame

Paddle size 140 x 160 mils

Material CDA194

Surface Ag spot plated

Process Stamped

Lead Lock Yes

Part Number 10100816

Treatment None

Die attach material

Epoxy 8390A

Wire Au wire

Mold Compound G600V

Plating Composition Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

| Assembly Lot No. | Wafer Lot No. | Date Code |
|-------------------|-------------------|-----------|
| MTAI172902922.000 | MCSO917225494.300 | 1641EDE |
| MTAI172903117.000 | MCSO917225494.300 | 1641GVK |
| MTAI172903129.000 | MCSO917225494.300 | 1641H0E |

Result

Pass Fail _____

8L SOIJ (.208") assembled by MTAI 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-020D 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-020D) | IPC/JEDEC C J-STD-020D | 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 | JESD22-A113 | 693(0) | 693 | Pass | Good Devices |
| | Bake 150°C, 24 hrs System: CHINEE | | | 693 | | |
| | 85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH | | | 693 | | |
| | 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 | | | 693 | | |
| | Electrical Test :+25°C,85°C and 125°C System: NEXTEST_PT | | | 0/693 | | |

PACKAGE QUALIFICATION REPORT

| Test Number (Reference) | Test Condition | Standard/ Method | Qty. (Acc.) | Def/SS. | Result | Remarks |
|--------------------------------------|---|------------------|-------------|---------|--------|---|
| Temp Cycle | Stress Condition: -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H | JESD22-A104 | | 231 | | Parts had been pre-conditioned at 260°C 77 units / lot |
| | Electrical Test: + 85°C and 125°C System: NEXTEST_PT | | 231(0) | 0/231 | Pass | |
| | Bond Strength: Wire Pull (> 3.0 grams) Bond Shear (>18.00 grams) | | 15 (0) | 0/15 | Pass | |
| UNBIASED-HAST | Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X | JESD22-A118 | | 231 | | Parts had been pre-conditioned at 260°C 77 units / lot |
| | Electrical Test: +25°C System: NEXTEST_PT | | 231(0) | 0/231 | Pass | |
| HAST | Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.5 Volts System: HAST 6000X | JESD22-A110 | | 231 | | Parts had been pre-conditioned at 260°C 77 units / lot |
| | Electrical Test: +25°C,85°C and 125°C System: NEXTEST_PT | | 231(0) | 0/231 | Pass | |
| High Temperature Storage Life | Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB | JESD22-A103 | | 45 | | 45 units |
| | Electrical Test :+25°C,85°C and 125°C System: NEXTEST_PT | | 45(0) | 0/45 | Pass | |

PACKAGE QUALIFICATION REPORT

| Test Number (Reference) | Test Condition | Standard/ Method | Qty. (Acc.) | Def/SS. | Result | Remarks |
|--|---------------------------|---------------------|-----------------|---------|--------|---------|
| Bond Strength Data Assembly | Wire Pull (>3.0 grams) | M2011 | 30 (0) Wires | 0/30 | Pass | |
| | Bond Shear (>18.00 grams) | JESD22- B116 | 30 (0) bonds | 0/30 | Pass | |