# Product Change Notification / ASER-25RLDG830

## Date:

29-Mar-2021

## Product Category:

Memory

## PCN Type:

Manufacturing Change

## Notification Subject:

CCB 4279.002 Final Notice: Qualification of GTK as a new assembly site for selected SST39VF3201xx and SST39VF3202xx device families available in 48L TSOP (12x20mm) package.

## Affected CPNs:

ASER-25RLDG830_Affected_CPN_03292021.pdf
ASER-25RLDG830_Affected_CPN_03292021.csv

## Notification Text:

**PCN Status:**Final notification.
**PCN Type:**
Manufacturing Change
**Microchip Parts Affected:**
Please open one of the files found in the Affected CPNs section.
NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).
**Description of Change:**
Qualification of GTK as a new assembly site for selected SST39VF3201xx and SST39VF3202xx device families available in 48L TSOP (12x20mm) package.
**Pre Change:**Assembled at LPI using 8340 die attach material, G700 mold compound and 183x161 mils lead frame paddle size.

**Post Change:**Assembled at GTK using EN-4900GC die attach material, G600F mold compound and 280x210 mils lead frame paddle size.

**Pre and Post Change Summary:**

| | Pre Change | Post Change |
|---|---|---|
| **Assembly Site** | Lingsen Precision Industries, LTD.<br>(LPI) | GREATEK ELETRONIC INC.<br>(GTK) |
| **Wire material** | Au | Au |
| **Die attach material** | 8340 | EN-4900GC |
| **Molding compound material** | G700 | G600F |
| **Lead frame material** | C7025 | C7025 |
| **Lead frame paddle size** | 183x161 | 280x210 |

**Impacts to Data Sheet:**None

**Change Impact:**
None.

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

**Change Implementation Status:**In Progress

**Estimated First Ship Date:**April 30, 2021 (date code: 2118)

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** | | | | | **April 2021** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Workweek | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 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:February 12, 2020:** Issued initial notification.

**March 29, 2021:** Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on April 30, 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_ASER-25RLDG830_Qual Report.pdf
PCN_ASER-25RLDG830_Pre and Post Change Summary.pdf

Please contact your local Microchip sales office with questions or concerns regarding this notification.

**Terms and Conditions:**

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If you wish to change your PCN profile, including opt out, please go to the PCN home page select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

Affected Catalog Part Numbers (CPN)

SST39VF3201B-70-4C-EKE
SST39VF3202B-70-4C-EKE
SST39VF3201B-70-4I-EKE
SST39VF3202B-70-4I-EKE
SST39VF3201B-70-4I-EKE-MCL
SST39VF3202B-70-4I-EKE-MCM
SST39VF3201B-70-4I-EKE-T

# QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

**PCN#: ASER-25RLDG830**

**Date**
**March 02, 2021**

**Qualification of GTK as a new assembly site for selected products available in 48L TSOP package. The qualification of SST39VF3201xx and SST39VF3202xx device families available in 48L TSOP (12x20mm) package will be qualify by similarity (QBS).**

# PACKAGE QUALIFICATION REPORT

| | |
|---|---|
| **Purpose** | Qualification of GTK as a new assembly site for selected products available in 48L TSOP package. The qualification of SST39VF3201xx and SST39VF3202xx device families available in 48L TSOP (12x20mm) package will be qualify by similarity (QBS). |
| **CN** | ES348366 |
| **QUAL ID** | R2000754 Rev A |
| **MP CODE** | X02035W9XA03 |
| **Part No.** | SST38LF6401-90-RT/TV-ENG |
| **Bonding No.** | BDE-006342 Rev. 03 |
| **CCB#:** | 4279, 4279.001 and 4279.002 |
| **<u>Package</u>** | |
| **Type** | 48L TSOP |
| **Package size** | 12 x 20 mm |
| **<u>Lead Frame</u>** | |
| **Paddle size** | 330 x 260 mils |
| **Material** | C7025 |
| **Surface** | Ag ring |
| **Process** | Stamped |
| **Lead Lock** | No |
| **Part Number** | 11-07048-003 |
| **Treatment** | None |
| **<u>Material</u>** | |
| **Epoxy** | EN-4900GC |
| **Wire** | Au |
| **Mold Compound** | G600F |
| **Plating Composition** | Matte Sn |

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# PACKAGE QUALIFICATION REPORT

**Manufacturing Information**

| Assembly Lot No. | Wafer lot No. | Date Code |
|---|---|---|
| GTK-212100034.000 | GC01921100652.110 | 2034C7Q |
| GTK-212200001.000 | GC01921141877.220 | 2035C84 |
| GTK-212200002.000 | GC01921141877.220 | 2035C8V |

**Result** [X] Pass [ ] Fail [ ] ____________________

48L TSOP (12x12 mm) assembled by GTK pass reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 3 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 3)** | 30°C/ 60%RH Moisture Soak 192 hrs.<br>System: TABAI ESPEC Model PR-3SPH<br>3x Convection-Reflow 265°C max<br>System: Vitronics Soltec MR1243<br>(IPC/JEDEC J-STD-020E) | IPC/JEDEC J-STD-020E | 135 | 0/135 | Pass | |
| **Precondition Prior Perform Reliability Tests (At MSL Level 3)** | **Electrical Test:** -55°C, 25°C and 125°C<br>System: Nextest_GV2X | JESD22-A113 | 729(0) | 729 | | Good Devices |
| | Bake 150°C, 24 hrs<br>System: CHINEE | | | 729 | | |
| | 30°C/60%RH Moisture Soak 192 hrs.<br>System: TABAI ESPEC Model PR-3SPH | | | 729 | | |
| | 3x Convection-Reflow 265°C max | | | 729 | | |
| | System: Vitronics Soltec MR1243 | | | | | |
| | **Electrical Test:** -55°C, 25°C and 125°C<br>System: Nextest_GV2X | | | 0/729 | Pass | |

# PACKAGE QUALIFICATION REPORT

| Test Number (Reference) | Test Condition | Standard / Method | Qty. (Acc.) | Def/SS. | Result | Remarks |
|---|---|---|---|---|---|---|
| Temp Cycle | **Stress Condition:**<br>-55°C to +125°C, 500 Cycles<br>System: TABAI ESPEC TSA-70H | JESD22-A104 | | 243 | | Parts had been pre-conditioned at 260°C |
| | **Electrical Test:** -55°C, 25°C and 125°C<br>System: Nextest_GV2X | | 243(0) | 0/243 | Pass | |
| | **Bond Strength:**<br>Wire Pull (>2.5 grams) | | 15 (0) | 0/15 | Pass | |
| | Bond Shear (>15.00 grams) | | 45 (0) | 0/45 | Pass | |
| | **Stress Condition:**<br>-55°C to +125°C, 1000 Cycles<br>System: TABAI ESPEC TSA-70H | | | 243 | | |
| | **Electrical Test:** -55°C, 25°C and 125°C<br>System: Nextest_GV2X | | 243(0) | 0/243 | Pass | |
| | **Bond Strength:**<br>Wire Pull (>2.5 grams) | | 15 (0) | 0/15 | Pass | |
| | Bond Shear (>15.00 grams) | | 45 (0) | 0/45 | Pass | |

# PACKAGE QUALIFICATION REPORT

| Test Number (Reference) | Test Condition | Standard/ Method | Qty. (Acc.) | Def/SS. | Result | Remarks |
|---|---|---|---|---|---|---|
| **HAST** | **Stress Condition:**<br>+130°C/85%RH, 96 hrs.<br>**Bias Volt:** 3.6 Volts<br>System: HAST 6000X | JESD22-A110 | | 243 | | Parts had been pre-conditioned at 260°C |
| | **Electrical Test:** -55°C, 25°C and 125°C<br>System: Nextest_GV2X | | 243(0) | 0/243 | Pass | 77 units / lot |
| | **Bond Strength:**<br>Wire Pull (>2.5 grams) | | 15 (0) | 0/15 | Pass | |
| | Bond Shear (>15.00 grams) | | 45 (0) | 0/45 | Pass | |
| | **Stress Condition:**<br>+130°C/85%RH, 192 hrs.<br>**Bias Volt:** 3.6 Volts<br>System: HAST 6000X | | | 243 | | |
| | **Electrical Test:** -55°C, 25°C and 125°C<br>System: Nextest_GV2X | | 243(0) | 0/243 | Pass | |
| | **Bond Strength:**<br>Wire Pull (>2.5 grams) | | 15 (0) | 0/15 | Pass | |
| | Bond Shear (>15.00 grams) | | 45 (0) | 0/45 | Pass | |

# PACKAGE QUALIFICATION REPORT

| Test Number (Reference) | Test Condition | Standard/ Method | Qty. (Acc.) | Def/SS. | Result | Remarks |
|---|---|---|---|---|---|---|
| UHAST | **Stress Condition:**<br>+130°C/85%RH, 96 hrs.<br>System: HAST 6000X | JESD22-A118 | | 243 | | Parts had been pre-conditioned at 260°C |
| | **Electrical Test:** -55°C, 25°C and 125°C<br>System: Nextest_GV2X | | 243(0) | 0/243 | Pass | 77 units / lot |
| | **Bond Strength:**<br>Wire Pull (>2.5 grams) | | 15 (0) | 0/15 | Pass | |
| | Bond Shear (>15.00 grams) | | 45 (0) | 0/45 | Pass | |
| | **Stress Condition:**<br>+130°C/85%RH, 192 hrs.<br>System: HAST 6000X | | | 243 | | |
| | **Electrical Test:** -55°C, 25°C and 125°C<br>System: Nextest_GV2X | | 243(0) | 0/243 | Pass | |
| | **Bond Strength:**<br>Wire Pull (>2.5 grams) | | 15 (0) | 0/15 | Pass | |
| | Bond Shear (>15.00 grams) | | 45 (0) | 0/45 | Pass | |

# PACKAGE QUALIFICATION REPORT

| Test Number (Reference) | Test Condition | Standard/ Method | Qty. (Acc.) | Def/SS. | Result | Remarks |
|---|---|---|---|---|---|---|
| **High Temperature Storage Life** | **Stress Condition:**<br>Bake 175°C, 500 hrs<br>System: TPS DC-166-F-ST350<br>**Electrical Test:** -55°C, 25°C and 125°C<br>System: Nextest_GV2X | JESD22-A103 | 45(0) | 45<br>0/45 | Pass | 45 units / lot |
| **Solderability Temp 215°C** | **Steam Aging:** Temp 93°C,8Hrs<br>System: SAS-3000<br>Solder Dipping: Solder Temp.215°C<br>Solder material: SnPb Sn63, Pb37<br>System: ERSA RA 2200D<br>Visual Inspection: External Visual Inspection | J-STD-002 | 22 (0) | 22<br>22<br>0/22 | Pass | |
| **Solderability Temp 245°C** | **Steam Aging:** Temp 93°C,8Hrs<br>System: SAS-3000<br>Solder Dipping:Solder Temp.245°C<br>Solder material:Pb Free Sn 95.5Ag3.9 Cu0.6<br>System: ERSA RA 2200D<br>Visual Inspection: External Visual Inspection | J-STD-002 | 22 (0) | 22<br>22<br>0/22 | Pass | |
| **Physical Dimensions** | Physical Dimension,<br>10 units / lot from 3 lot | JESD22-B100/B108 | 30(0) Units | 0/30 | Pass | |
| **Bond Strength Data Assembly** | Wire Pull (> 2.5 grams)<br>Bond Shear (>15.00 grams) | Mil.Std. 883-2011<br>CDF-AEC-Q100-001 | 30 (0) Wires<br>30 (0) | 0/30<br>0/30 | Pass<br>Pass | |

# CCB 4279.002
# Pre and Post Change Summary
# PCN #: ASER-25RLDG830

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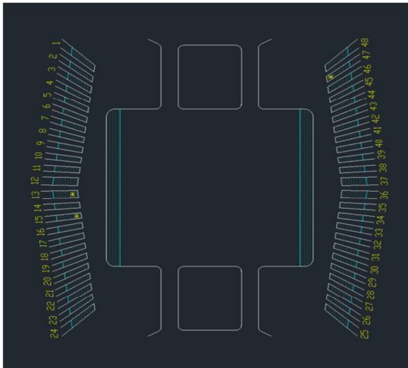
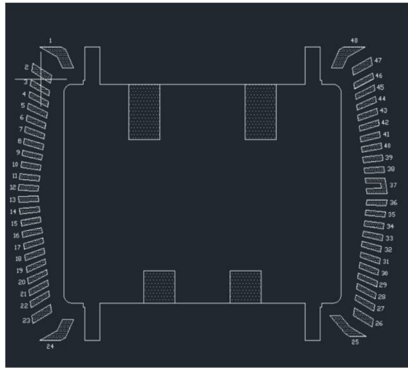
**Qualification of GTK as a new assembly site for selected SST39VF3201xx and SST39VF3202xx device families available in 48L TSOP (12x20mm) package.**

# Lead frame Comparison

| LPI | GTK |
|---|---|
|  |  |

**LPI**

| Paddle size | 183 x 161 mils |
|---|---|

**GTK**

| Paddle size | 280 x 210 mils |
|---|---|