



Product Change Notification / RMES-19GFWK021

Date:

20-Jun-2022

Product Category:

Memory

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4663 Final Notice: Qualification of UAT as a new bumping site for SST25VF040B-50-4C-ZAE, SST25VF080B-50-4I-ZCE, SST25WF080BT-40I/CS and SST25WF080BT-40I/CS-GN catalog part numbers (CPN) available in 8L & 16L CSP and 9L WLCSP packages.

Affected CPNs:

[RMES-19GFWK021_Affected_CPN_06202022.pdf](#)

[RMES-19GFWK021_Affected_CPN_06202022.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 UAT as a new bumping site for SST25VF040B-50-4C-ZAE, SST25VF080B-50-4I-ZCE, SST25WF080BT-40I/CS and SST25WF080BT-40I/CS-GN catalog part number (CPN) available in 8L & 16L CSP and 9L WLCSP packages.

Pre and Post Change Summary:

Date															
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 19, 2021: Issued initial notification.

June 20, 2022: Issued final notification. Attached the qualification report. Updated the pre and post summary table to include backend site. Updated the impact to datasheet. Provided estimated first ship date to be on July 18, 2022.

Attachments:

[PCN_RMES-19GFWK021 Qual Report.pdf](#)

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

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Affected Catalog Part Numbers (CPN)

SST25VF040B-50-4C-ZAE

SST25VF080B-50-4I-ZCE

SST25WF080BT-40I/CS

SST25WF080BT-40I/CS-GN



QUALIFICATION REPORT SUMMARY

PCN#: RMES-19GFWK021

Date
June 8, 2022

Qualification of UAT as a new bumping site for SST25VF040B-50-4C-ZAE, SST25VF080B-50-4I-ZCE, SST25WF080BT-40I/CS and SST25WF080BT-40I/CS-GN catalog part numbers (CPN) available in 8L & 16L CSP and 9L WLCSP packages.

I. Summary

This report summarizes the passing results of stresses performed on the X0502 (SPI Serial Flash) in a 9L-WLCSP package assembly at UAT. These assembly lots were processed through the entire production package assembly process and qualified to the package qualification guidelines established in Microchip specification QCI-39000 at a Moisture/Reflow Sensitivity Classification Level 1 (MSL1) at 260°C reflow temperature per IPC/JEDEC J-STD020D standard.

Conclusion

This report presents data that qualifies the specified product in the GSMC fab technology package group of UAT package assembly: X0502, T0005 and T0002.

II. Description of Package / Die selected for Qualification

Assembly site	UAT
CPN	SST25WF080BT-40I/CS
MPN	X0502T9FXA00
Package Pin Count	9
Package Group	WLCSP
Die / Package Size	71.3 x 83.1 mils
Bump Material	SAC405
Bump Pitch / Diameter	500 / 300 um
RDL Material	Ti-Cu-Cu
UBM Material	Ti-Cu-Cu
Re-passivation Polymer	PBO
Polymer Thickness	7 um
Qual ID	ML0620220020
CCB	4663

III. Lot Information

Lot #	Lot Number	Wafer lot number	Trace Code
Lot 1	UAT-221300002.000	GC01921340653.000 / A996979.1.B (18)	21256PC
Lot 2	UAT-221300003.000	GC01921340653.000 / A996979.1.B (24)	21256R4
Lot 3	UAT-221300004.000	GC01921340653.000 / A996979.1.B (25)	21266RE
Lot 4	UAT-221300003.300	GC01921340653.000 / A996979.1.B (24)	21256R4

IV. Stress Results

- Note: Units were stressed while adhered 'dead bug' (at bulk silicon surface) by double-sided Kapton tape to a sacrificial silicon wafer.

Precondition Prior to TC and UHST Stresses

Test Method	JESD22-A113; IPC/JEDEC J-STD-020
Test Condition	Bake 24 hours at +150°C Soak 85% RH / 168 hours 3x Convection Reflow 265°C max
Moisture Reflow Sensitivity Level	1
Electrical Results at +25°C (Fail / Pass)	0 / 680

- Precondition is prior to Temperature Cycle and Unbiased HAST stresses.

High Temperature Storage

Test Method	JESD22-A103
Test Condition	175°C / 500 hours
Sample Size	90 units / Lot 1 & 4
Electrical Results at +25°C (Fail / Pass)	0 / 180

Temperature Cycling (TC)

Test Method	JESD22-A104
Test Condition	-65°C / +150°C Air to Air / 500 Cycles
Required Sample Size	90 each lot / 4 lots
Electrical Results at +25°C (Fail / Pass)	0 / 360
Visual Inspection (Fail / Pass)	0 / 360

- Preconditioned at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

Unbiased HAST (UHST)

Test Method	JESD22-A118
Test Condition	+130°C / 85% RH / 96 hours
Required Sample Size	80 each lot / 4 lots
Electrical Results at +25°C (Fail / Pass)	0 / 320

- Preconditioned at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

V. Bond Strength Assembly Data

Subcontractor Unstressed (Bump) Shear Data

Test Method	JESD22B117A
Test Condition	45° street to bump at 250 um/s & 25% bump height (range 1kg)
Sample Size	10 bonds per lot / 3 lots
Average per each lot (Fail / Pass)	5.85 / 5.59 / 5.59 (0 / 30)

Subcontractor Post HTS Device Ball (Bump) Shear

Test Method	JESD22B117A / Mil-Std-883 M2011.8
Test Condition	45° street to bump at 250 um/s & 25% bump height (range 1kg)
Sample Size	30 bonds per lot / Lot 1 & 2
Criteria	> 3 mg/um ²
Average per each lot (Fail / Pass)	3.41, 3.47 (0 / 60)