Product Change Notification / GBNG-30ZMTP819

Date:

04-Mar-2021

Product Category:

Memory

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4284 Final Notice: Qualification of GTK as a new assembly site for selected SST39VF640xxx and SST39VF320xxx device families available in 48L TSOP (12x20mm) package.

Affected CPNs:

GBNG-30ZMTP819_Affected_CPN_03042021.pdf
GBNG-30ZMTP819_Affected_CPN_03042021.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 SST39VF640xxx and SST39VF320xxx device families available in 48L TSOP (12x20mm) package.

Pre Change:
Assembled at LPI using 8340 die attach, G700 molding compound material, 276 x 350 or 190 x 250 mils paddle size and

double ring plating DAP Surface Prep.

Post Change:
Assembled at GTK using EN-4900GC die attach, G600F molding compound material, 330 x 260 mils paddle size and ring plating DAP Surface Prep.

Pre and Post Change Summary:

	Pre Change		Post Change
Assembly Site	Lingsen Precision Industries, LTD. (LPI)		Greatek Electronic Inc. (GTK)
Wire material	Au		Au
Die attach material	8340		EN-4900GC
Molding compound material	G700		G600F
Lead frame material	C7025		C7025
Paddle size	276 x 350 mils	190 x 250 mils	330 x 260 mils
DAP Surface Prep	Double ring plating		Ring plating
Lead Lock (Locking Hole)	No		No

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:
March 31, 2021 (date code: 2114)

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

Time Table Summary:

	July 2020					>	**March 2021**				
Workweek	27	28	29	30	31		10	11	12	13	14
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:

July 02, 2020: Issued initial notification.

February 23, 2021: Re-issued initial notification. Added SST39VF320xxx device family in notification subject, description of change and affected CPN list. Updated the qual plan title and purpose. Added paddle size, DAP surface PREP and lead lock information in Pre and Post change description and table summary.

March 04, 2021: Issued final notification. Attached the qualification report and added estimated first ship date by March 31, 2021. Corrected the Leadlock from Yes to No for LPI in Leadframe comparison file.

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

Attachments:

PCN_GBNG-30ZMTP819_Pre and Post Change_Summary.pdf
PCN_GBNG-30ZMTP819_Qual_Report.pdf

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

Terms and Conditions:

If you wish to receive Microchip PCNs via email please register for our PCN email service at our PCN home page select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the PCN FAQ section.

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)

SST39VF3201-70-4C-EKE
SST39VF3202-70-4C-EKE
SST39VF3201-70-4I-EKE
SST39VF3202-70-4I-EKE
SST39VF3201-70-4C-EKE-T
SST39VF3201-70-4I-EKE-T
SST39VF6401B-70-4C-EKE
SST39VF6402B-70-4C-EKE
SST39VF6401B-70-4I-EKE-100
SST39VF6401B-70-4I-EKE-101
SST39VF6401B-70-4I-EKE
SST39VF6402B-70-4I-EKE
SST39VF6401B-70-4I-EKE-MCL
SST39VF6401B-70-4I-EKE-TZ009
SST39VF6401B-70-4C-EKE-T
SST39VF6402B-70-4C-EKE-T
SST39VF6401B-70-4I-EKE-T

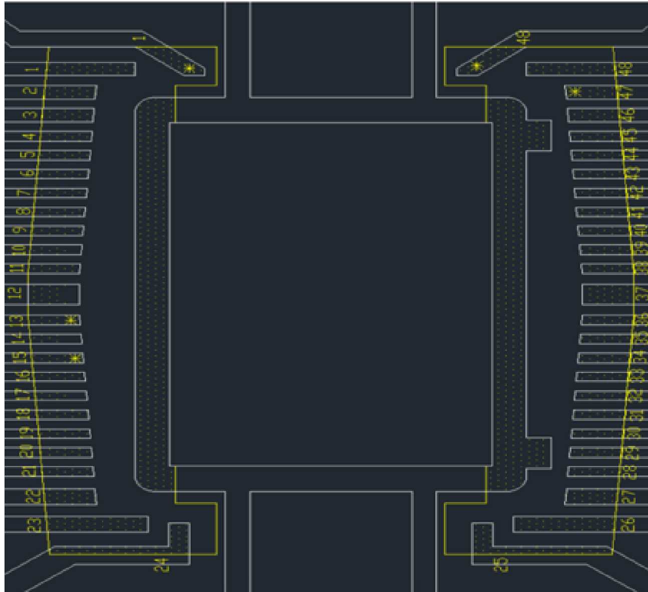
CCB 4284
Pre and Post Change Summary
PCN #: GBNG-30ZMTP819

A Leading Provider of Smart, Connected and Secure Embedded Control Solutions

Qualification of GTK as a new assembly site for selected SST39VF640xxx and SST39VF320xxx device families available in 48L TSOP (12x20mm) package.

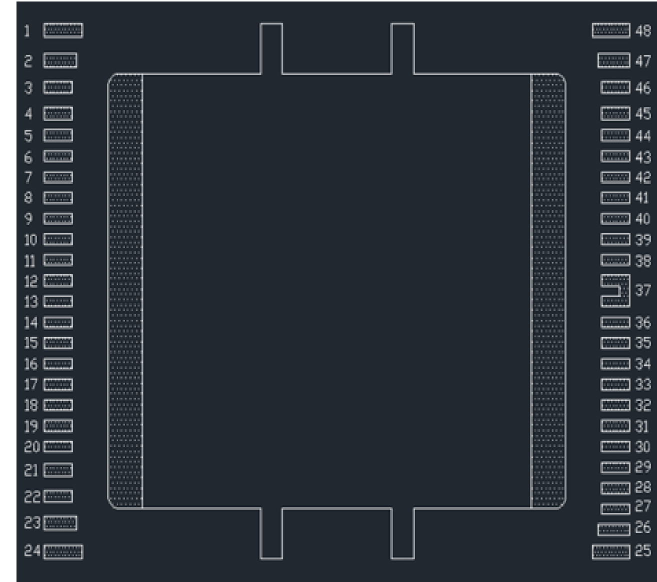
LEAD FRAME COMPARISON

LPI



Paddle size	276 x 350 or 190 x 250 mils
Lead Lock	No
DAP Surface Prep	Double ring plating

GTK



Paddle size	330 x 260 mils
Lead Lock	No
DAP Surface Prep	Ring plating

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QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: GBNG-30ZMTP819

Date:
February 18, 2021

Qualification of GTK as a new assembly site for selected SST39VF640xxx and SST39VF320xxx device families available in 48L TSOP (12x20mm) package.

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PACKAGE QUALIFICATION REPORT

Purpose	**Qualification of GTK as a new assembly site for selected SST39VF640xxx and SST39VF320xxx device families available in 48L TSOP (12x20mm) package.**
CN	ES350838
QUAL ID	R2000914 Rev. A
MP CODE	T00081W9XM70
Part No.	SST39VF6401B-70-4C-EKE
Bonding No.	BDM-002663 Rev. A
CCB No.	4284
Package	
Type	48L TSOP
Package size	12x20x1.0 mm
Lead Frame	
Paddle size	330 x 260 mils
Material	C7025
Surface	Ring Plating
Process	Stamped
Lead Lock	No
Part Number	11-07048-003
Treatment	none
Material	
Epoxy	EN-4900GC
Wire	Au wire
Mold Compound	G600F
Plating Composition	Matte Sn

MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information:

Assembly Lot No.	Wafer No.	Date Code
GTK-213200042.000	GC01919405225.000	20452ER
GTK-213200043.000	GC01919405225.000	20452GP
GTK-213300001.000	GC01919405225.000	20462H4

Result [X] Pass [ ] Fail [ ] ____________________

48L TSOP 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
Precondition Prior Perform Reliability Tests (At MSL Level 3)	**Electrical Test:** +25°C and 70°C System: NEXTEST_GV2X	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE	JIP/ IPC/JEDEC J-STD-020E		693		
	30°C/60%RH Moisture Soak 192 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test: +25°C and 70°C System: NEXTEST_GV2X			0/693	Pass	

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
	Electrical Test: + 70°C System: NEXTEST_GV2X		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (> 4.00 grams)		15 (0)	0/15	Pass	
	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
	Electrical Test: +25°C System: NEXTEST_GV2X		231(0)	0/231	Pass	77 units / lot
HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. **Bias Volt:** 3.6 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C and 70°C System: NEXTEST_GV2X		231(0)	0/231	Pass	77 units / lot
High Temperature Storage Life	**Stress Condition:** Bake 175°C, 504 hrs System: SHEL LAB	JESD22-A103		45		45 units
	Electrical Test: +25°C and 70°C System: NEXTEST_GV2X		45(0)	0/45	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 Line Thickness	Bond Line Thickness	SPI-45528	15(0)	15(0)	Pass	5 units / lot
Physical Dimensions	Physical Dimension, 10 units from 1 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Wire Pull (> 4.00 grams)	Mil. Std. 883-2011	30 (0) Wires	0/30	Pass	
	Bond Shear (> 20.00 grams)	CDF-AEC-Q100-001	30 (0) bonds	0/30	Pass	