Product Change Notification / KSRA-18BGHS695

Date:

30-Sep-2021

Product Category:

Memory

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4559 Final Notice: Qualification of SIGN as a new assembly site for selected SST39LFxxxx and SST39VFxxxx device families available in 48L TSOP (12x20mm) package.

Affected CPNs:

KSRA-18BGHS695_Affected_CPN_09302021.pdf
KSRA-18BGHS695_Affected_CPN_09302021.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.

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

Description of Change:
Qualification of SIGN as a new assembly site for selected SST39LFxx and SST39VFxx device families available in 48L TSOP (12x20mm) package.

Pre Change:

Assembled at LPI using 8340 die attach material and lead frame with paddle size 207x142mils, 183x161mils or 160x130mils.

Post Change:
Assembled at SIGN using AP-4300 die attach material and lead frame with paddle size 209x165mils or 159x165mils

Pre and Post Change Summary:

	Pre Change			**Post Change**	
Assembly Site	Lingsen Precision Industries, LTD. (LPI)			Signetics Corporation (SIGN)	
Bond Wire material	Au			Au	
Die Attach material	8340			AP-4300	
Mold compound material	G700			G700	
Lead frame material	C7025			C7025	
DAP Surface Prep	Ring/Selective			Ring/Selective	
Lead frame paddle size	207x142mils	183x161mils	160x130mils	209x165mils	159x165mils
	See attached pre and post change comparison				

Impacts to Data Sheet:

None

Change Impact:
None

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

Change Implementation Status:
In Progress

Estimated First Ship Date:
October 31, 2021 (date code: 2145)

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

Time Table Summary:

	February 2021					**-->**	**September 2021**					**October 2021**				
Workweek	06	07	08	09	10		36	37	38	39	40	41	42	43	44	45
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 23, 2021: Issued initial notification.
April 14, 2021: Re-issued initial notification to change die attach material to AP-4300 in pre and post change and qual plan.
September 30, 2021: Issued final notification. Updated the lead frame DAP Surface Prep pre and post change to Ring/Selective. Attached the qualification report. Provided estimated first ship date to be on October 31, 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-18BGHS695_Qual_Report.pdf
PCN_KSRA-18BGHS695_Pre and Post Change_Summary.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.

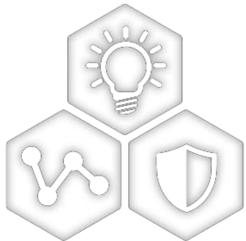
If you wish to change your PCN profile, including opt out, please go to the PCN home page select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

Affected Catalog Part Numbers (CPN)

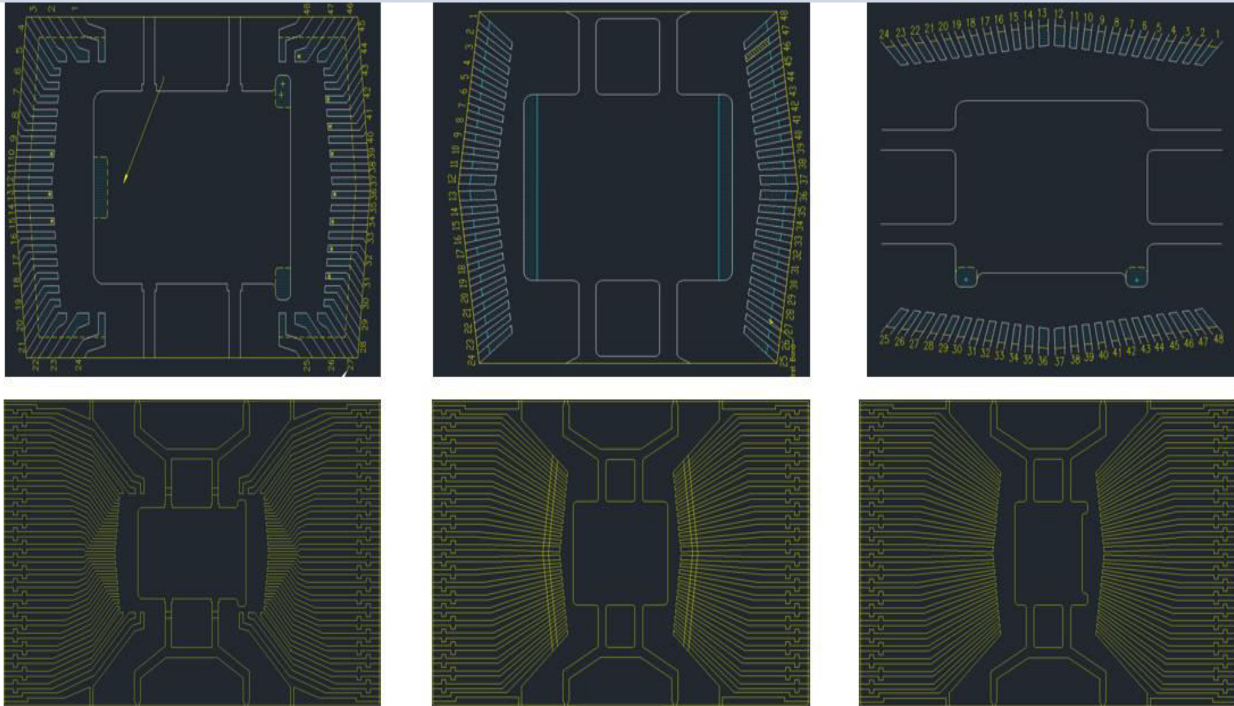
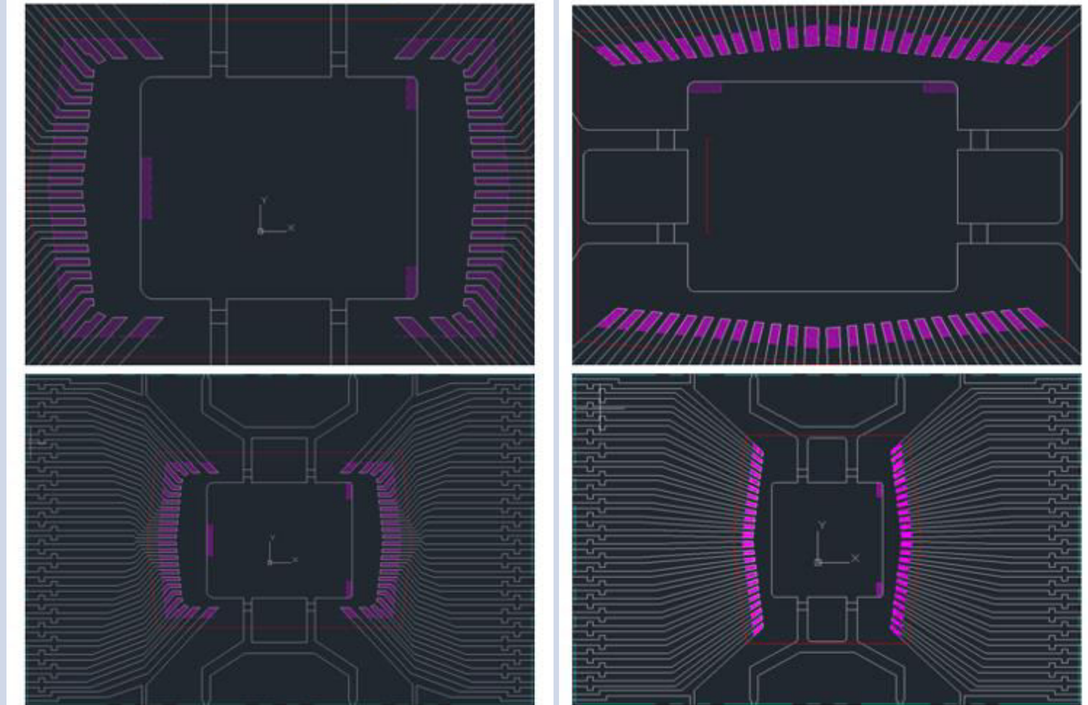
SST39LF400A-55-4C-EKE
SST39VF400A-70-4C-EKE
SST39VF400A-70-4I-EKE
SST39LF400A-55-4C-EKE-T
SST39VF400A-70-4C-EKE-T
SST39VF400A-70-4I-EKE-T
SST39LF800A-55-4C-EKE
SST39VF800A-70-4C-EKE
SST39VF800A-70-4I-EKE
SST39VF800A-70-4I-EKE-TZ009
SST39VF800A-70-4C-EKE-T
SST39VF800A-70-4I-EKE-T
SST39VF1601-70-4C-EKE
SST39VF1602-70-4C-EKE
SST39VF1681-70-4C-EKE
SST39VF1682-70-4C-EKE
SST39VF1601-70-4C-EKE-PP013
SST39VF1601-70-4I-EKE
SST39VF1602-70-4I-EKE
SST39VF1681-70-4I-EKE
SST39VF1682-70-4I-EKE
SST39VF1601-70-4I-EKE-TZ009
SST39VF1601-70-4C-EKE-T
SST39VF1602-70-4C-EKE-T
SST39VF1681-70-4C-EKE-T
SST39VF1682-70-4C-EKE-T
SST39VF1601-70-4I-EKE-T
SST39VF1602-70-4I-EKE-T
SST39VF1681-70-4I-EKE-T
SST39LF200A-55-4C-EKE
SST39VF200A-70-4C-EKE
SST39VF200A-70-4I-EKE
SST39LF200A-55-4C-EKE-T
SST39VF200A-70-4C-EKE-T
SST39VF200A-70-4I-EKE-T
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

CCB 4559
Pre and Post Change Summary
PCN # KSRA-18BGHS695

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



Lead frame Comparison

Pre Change LPI	Post Change SIGN
	

MICROCHIP

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: KSRA-18BGHS695

Date

September 21, 2021

Qualification of SIGN as a new assembly site for selected SST39LFxxxx and SST39VFxxxx device families available in 48L TSOP (12x20mm) package.

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PACKAGE QUALIFICATION REPORT

Purpose	**Qualification of SIGN as a new assembly site for selected SST39LFxxxx and SST39VFxxxx device families available in 48L TSOP (12x20mm) package.**
CCB No.	4559
CN	ES358575
QUAL ID	R2100642 Rev. A
MP CODE	X02057W9XM70
Part No.	SST39VF3201B-70-4I-EKE
Bonding No.	BDM-002852 Rev. B
Package	
Type	48L TSOP
Package size	12 x 20 mm
Lead Frame	
Paddle size	209 x 165 mils
Material	C7025
Surface	Ring / Selective Plating
Process	Stamped
Lead Lock	No
Part Number	FLF-00001
Treatment	Roughened
Material	
Epoxy	AP-4300
Wire	Au wire
Mold Compound	G700
Plating Composition	Matte Sn

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
SIGN220200003.000	GC01919127814.100	2114KGK
SIGN220200004.000	GC01920463252.000	2114KGT
SIGN220200005.000	GC01921068944.000	2114KGV

Result [X] Pass [ ] Fail [ ] ____________________

48L TSOP (12x20 mm) assembled by SIGN 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, 95°C and -40°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			693		
	System: Vitronics Soltec MR1243					
	Electrical Test: +25°C and 95°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: +95°C System: NEXTEST_GV2X		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (> 2.5 grams)		15 (0)	0/15	Pass	
	Bond Shear (>15.00 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 95°C System: NEXTEST_GV2X		231(0)	0/231	Pass	77 units / lot

PACKAGE QUALIFICATION REPORT						
Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
High Temperature Storage Life	**Stress Condition:** Bake 175°C, 504 hrs System: SHEL LAB **Electrical Test:** +25°C and 95°C System: NEXTEST_GV2X	JESD22-A103	45(0)	45 0/45	Pass	45 units
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 Cu0.6System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22 (0)	22 22 0/22	Pass	
Physical **Dimensions**	Physical Dimension, 10 units from 1 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
Bond Strength **Data Assembly**	Wire Pull (> 3.00 grams) Bond Shear (> 10.00 grams)	Mil. Std. 883-2011 CDF-AEC-Q100-001	30 (0) Wires 30 (0) bonds	0/30 0/30	Pass Pass	