Product Change Notification / JAON-17DZYV010

Date:

01-Oct-2021

Product Category:

Memory

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4560 Final Notice: Qualification of SIGN as a new assembly site for selected SST39LF80xx, SST39VF160xx and SST39VF80xx device families available in 48L TSOP (12x20mm) package.

Affected CPNs:

JAON-17DZYV010_Affected_CPN_10012021.pdf
JAON-17DZYV010_Affected_CPN_10012021.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 SIGN as a new assembly site for selected SST39LF80xx, SST39VF160xx and SST39VF80xx device families available in 48L TSOP (12x20mm) package.

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 plating	Ring /Selective Plating		Ring /Selective Plating	
Lead frame paddle size	207x142mils Note 1	160x130mils Note 2	209x165mils Note 1	159x165mils Note 2
	See attached pre and post change comparison.			

Note 1: Applicable for SST39VF160xx device family.
Note 2: Applicable for SST39LF80xx and SST39VF80xx device families

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					**>**	**October 2021**					
Workweek	06	07	08	09	10		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 19, 2021: Issued initial notification.
April 08, 2021: Re-issued initial notification to update the pre and post comparison table to modify SIGN die attach material from 8340 to AP-4300. Updated LPI DAP surface plating from Ring plating to Ring /Selective plating and updated SIGN DAP surface plating from Double ring plating to Ring /Selective plating. Updated the Qual plan summary to modify SIGN die attach material from 8340 to AP-4300 and to modify SIGN DAP surface plating from Double ring plating to Ring /Selective plating.
October 1, 2021: Issued final notification.

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

Attachments:

PCN_JAON-17DZYV010_Qual Report.pdf
PCN_JAON-17DZYV010_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)

SST39VF1601C-70-4C-EKE
SST39VF1602C-70-4C-EKE
SST39VF1601C-70-4I-EKE
SST39VF1602C-70-4I-EKE
SST39VF1602C-70-4I-EKE-MCK
SST39VF1601C-70-4C-EKE-T
SST39VF1602C-70-4C-EKE-T
SST39VF1601C-70-4I-EKE-T
SST39VF1602C-70-4I-EKE-T
SST39LF801C-55-4C-EKE
SST39LF802C-55-4C-EKE
SST39VF801C-70-4C-EKE
SST39VF802C-70-4C-EKE
SST39VF801C-70-4I-EKE
SST39VF802C-70-4I-EKE
SST39LF801C-55-4C-EKE-T
SST39LF802C-55-4C-EKE-T
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SST39VF802C-70-4C-EKE-T
SST39VF801C-70-4I-EKE-T
SST39VF802C-70-4I-EKE-T

CCB 4560

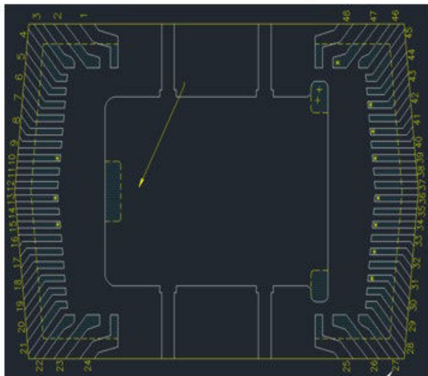
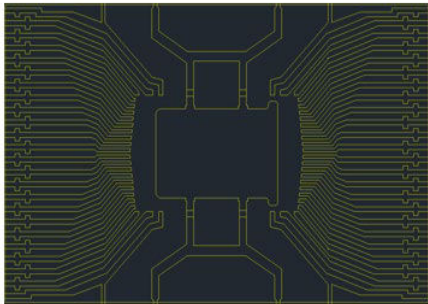
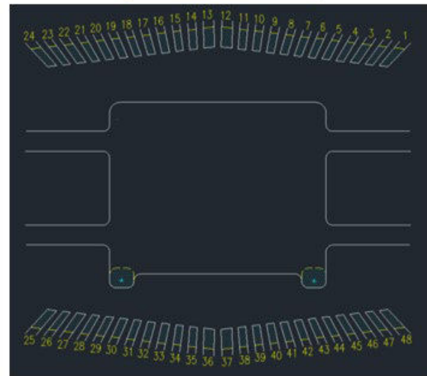
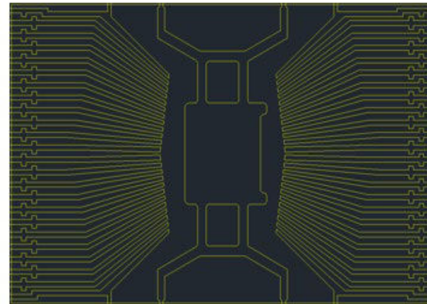
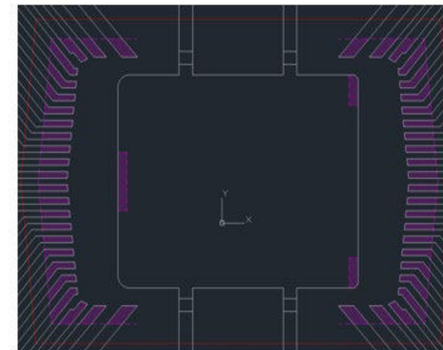
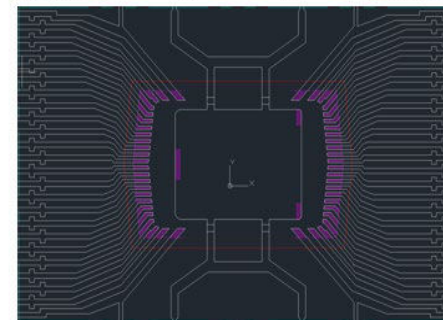
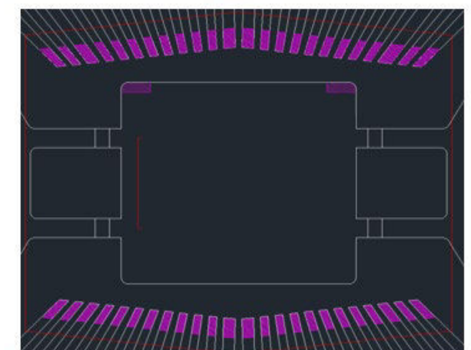
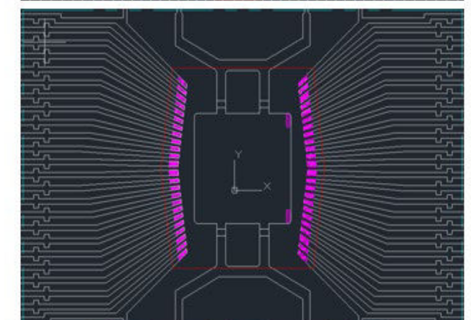
Pre and Post Change Summary

PCN # JAON-17DZYV010

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

Qualification of SIGN as a new assembly site for selected SST39LF80xx, SST39VF160xx and SST39VF80xx device families available in 48L TSOP (12x20mm) package.

Lead frame Comparison

Pre Change LPI		Post Change SIGN	
Applicable for SST39VF160xx device family.	Applicable for SST39LF80xx and SST39VF80xx device families	Applicable for SST39VF160xx device family.	Applicable for SST39LF80xx and SST39VF80xx device families
 	 	 	 

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QUALIFICATION REPORT SUMMARY

PCN #: JAON-17DZYV010

Date:
September 17, 2021

Qualification of SIGN as a new assembly site for selected SST39LF80xx, SST39VF160xx and SST39VF80xx device families available in 48L TSOP (12x20mm) package.

Purpose	Qualification of SIGN as a new assembly site for selected SST39LF80xx, SST39VF160xx and SST39VF80xx device families available in 48L TSOP (12x20mm) package.
CCB	4560
CN	ES358569
QUAL ID	R2100641 Rev. A
MP CODE	X02047W9XMCK
Part No.	SST39VF1602C-70-4I-EKE-MCK
Bonding No.	BDM-002853 Rev. B
<u>Package</u>	
Type	48L TSOP
Package size	12 x 20 mm
<u>Lead Frame</u>	
Paddle size	209 x 165 mils
Material	C7025
Surface	Ring / Selective Plating
Process	Stamped
Lead Lock	No
Part Number	FLF-00001
Treatment	Roughened
<u>Material</u>	
Epoxy	AP-4300
Wire	Au wire
Mold Compound	G700
Plating Composition	Matte Sn

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PACKAGE QUALIFICATION REPORT

Manufacturing Information

Lot No.	WF No.	Date Code
SIGN220700001.000	GC01922039608.200	21191RS
SIGN220700002.000	GC01922039608.200	21191T4
SIGN220700003.000	GC01922039608.200	21191TW

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, 85°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 85°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: +85°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:** 3.5 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C and 85°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 85°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 Cu0.6 System: 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 (> 2.40 grams)	Mil. Std. 883-2011	30 (0) Wires	0/30	Pass	
	Bond Shear (> 8.00 grams)	CDF-AEC-Q100-001	30 (0) bonds	0/30	Pass	