Product Change Notification / ASER-05IJPW824

Date:

28-Sep-2021

Product Category:

Memory

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4556 Final Notice: Qualification of SIGN as a new assembly site for selected SST39V320xx and SST38VF640xx device families available in 48L TSOP (12x20mm) package.

Affected CPNs:

ASER-05IJPW824_Affected_CPN_09282021.pdf
ASER-05IJPW824_Affected_CPN_09282021.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 SST39V320xx and SST38VF640xx device families available in 48L TSOP (12x20mm) package.

Pre Change: Assembled at LPI assembly site

Post Change: Assembled at SIGN assembly site

Pre and Post Change Summary:

	Pre Change	Post Change

Assembly Site	Lingsen Precision Industries, LTD. (LPI)		Signetics Corporation (SIGN)
Wire material	Au		Au
Die attach material	8340		AP-4300
Molding compound material	G700		G700
Lead frame material	C7025		C7025
	See Pre and Post Change comparison attachment.		
Lead frame paddle size	207 x 142 mils	183 x 161 mils	209 x 165 mils
Lead frame DAP surface prep	Ring /Selective Plating	Ring /Selective Plating	Ring /Selective Plating

Impacts to Data Sheet: None

Change Impact: None

Reason for Change: To improve manufacturability by qualifying SIGN as a new assembly site.

Change Implementation Status: In Progress

Estimated First Ship Date:
October 15, 2021 (date code: 2142)

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	6	7	8	9		36	37	38	39	40	41	42	43	44
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, 2021: Issued initial notification.**March 30, 2021:** Reissued initial notification. Changed die attach to improve performance and workability**March 31, 2021:** Reissued initial notification. Updated qual plan to reflect change in die attach.**September 27, 2021**: Issued final notification. Attached the qualification report. Provided estimated first ship date to be on October 15, 2021. Updated the lead frame DAP surface prep to Ring /Selective Plating in the pre and post change summary table for both LPI and SIGN assembly site.

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-05IJPW824_Pre and Post Change Summary.pdf
PCN_ASER-05IJPW824_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.

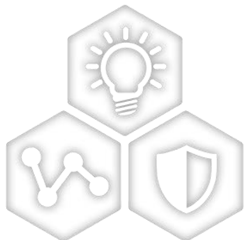
Affected Catalog Part Numbers (CPN)

SST39VF3201C-70-4I-EKE
SST39VF3202C-70-4I-EKE
SST39VF3201C-70-4I-EKE-REL
SST39VF3201C-70-4I-EKE-T
SST39VF3202C-70-4I-EKE-T
SST38VF6401B-70I/TV-100
SST38VF6401B-70I/TV-101
SST38VF6401B-70I/TV
SST38VF6402B-70I/TV
SST38VF6403B-70I/TV
SST38VF6404B-70I/TV
SST38VF6401BT-70I/TV
SST38VF6402BT-70I/TV
SST38VF6403BT-70I/TV
SST38VF6404BT-70I/TV

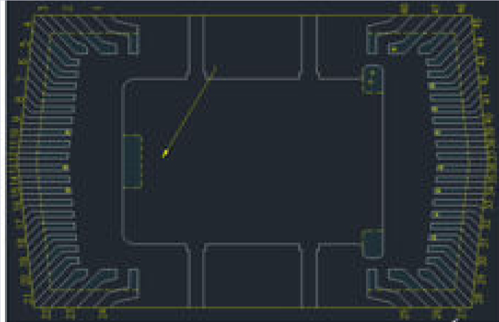
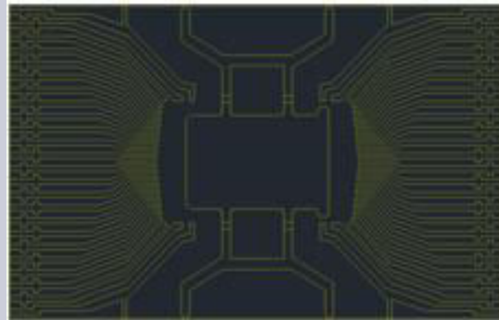
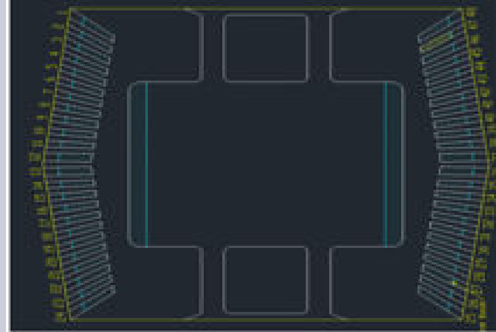
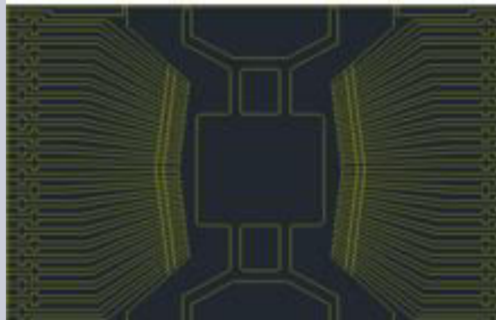
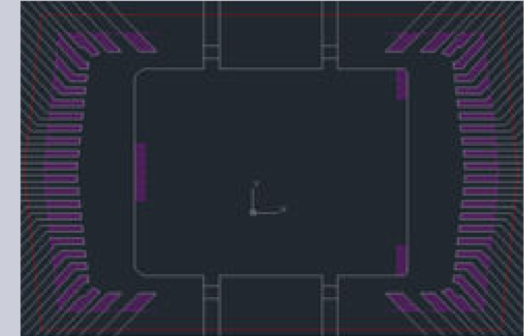
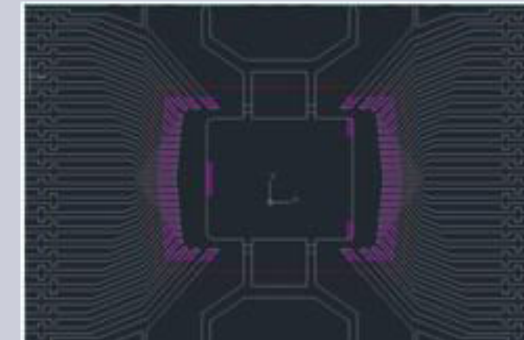
CCB 4556
Pre and Post Change Summary
PCN#: ASER-05IJPW824

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

Qualification of SIGN as a new assembly site for selected SST39V320xx and SST38VF640xx device families available in 48L TSOP (12x20mm) package.



Lead frame comparison

LPI		SIGN
 	 	 
Lead Frame Paddle size: 207 x 142 mils	Lead Frame Paddle size: 183 x 161 mils	Lead Frame Paddle size: 209 x 165 mils

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QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN # ASER-05IJPW824

Date
September 09, 2021

Qualification of SIGN as a new assembly site for selected SST39V320xx and SST38VF640xx device families available in 48L TSOP (12x20mm) package.

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of SIGN as a new assembly site for selected SST39V320xx and SST38VF640xx device families available in 48L TSOP (12x20mm) package.
CN	ES360115
QUAL ID	R2100752 Rev A
CCB No.	4556
MP CODE	S00017W9XM70
Part No.	SST39VF3201C-70-4I-EKE
Bonding No.	BDM-002851 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
Mold Compound	G700
Plating Composition	Matte Sn

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
SIGN221100005.000	SCB1922050436.110	2123JTC
SIGN221200002.000	SCB1922050436.110	2124JUS
SIGN221200001.000	SCB1922050436.110	2124JU5

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 System: Vitronics Soltec MR1243			693		
	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 **Electrical Test:** +85°C System: NEXTEST_GV2X	JESD22A104	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C 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 **Electrical Test:** +25°C System: NEXTEST_GV2X	JESD22A118	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot
HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. **Bias Volt:** 3.6 Volts System: HAST 6000X **Electrical Test:** +25°C and 85°C System: NEXTEST_GV2X	JESD22A110	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C 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	JESD22A103	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) Bond Shear (> 8.00 grams)	Mil. Std. 883-2011 CDF-AECQ100-001	30 (0) Wires 30 (0) bonds	0/30 0/30	Pass Pass	