Product Change Notification / ALAN-24AINW535

Date:

17-Nov-2022

Product Category:

Memory

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5336 Final Notice: Qualification of MTAI as a new assembly site for SST26VF016-80-5I-S2AE and SST26VF016-80-5I-S2AE-T catalog part numbers (CPN) available in 8L SOIJ (.208in) package.

Affected CPNs:

ALAN-24AINW535_Affected_CPN_11172022.pdf
ALAN-24AINW535_Affected_CPN_11172022.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 MTAI as a new assembly site for SST26VF016-80-5I-S2AE and SST26VF016-80-5I-S2AE-T catalog part numbers (CPN) available in 8L SOIJ (.208in) package.

Pre and Post Change Summary:

	Pre Change	Post Change

Assembly Site	Greatek Electronic Inc. (GTK)	Lingsen Precision Industries, LTD. (LPI)	Microchip Technology Thailand (MTAI)
Wire Material	Au	Au	Au
Die Attach Material	8340	8340	8390A
Molding Compound Material	G600	G600	G600V
Lead-Frame Material	C194	C194	CDA194
Lead-Frame Paddle Size	140 x 160 mils	142 x 168 mils	140 x 160 mils
DAP Surface Prep	Ag spot	None	Bare Cu
MSL	3	3	1
See Pre and Post Change Summary attachment for comparison			

Impacts to Data Sheet: None

Change Impact None

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

Change Implementation Status: In Progress

Estimated First Ship Date: November 25, 2022 (date code: 2248)

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

Due to unforeseen circumstances, that are out of Microchip's control, full qualification will be made available as soon as it is approved which may be after the estimated first ship date so that Microchip can maintain continuity of supply and not disrupt customer orders.

Time Table Summary:

	November 2022					**>**	**January 2023**				
Workweek	45	46	47	48	49		1	2	3	4	5
Qual Report Availability											X
Final PCN Issue Date			X								
Estimated Implementation Date				X							

Method to Identify Change: Traceability Code

Partial Qualification Report: Please open the attachments included with this PCN labeled as PCN_#_Qual_Report.

Note 1: The attached qualification report is incomplete but based on the available data and historical data, Microchip is confident that the pending qualification requirement will pass. The estimated qualification completion date will be on January 31, 2023. This final PCN will be updated to include the completed qualification report.
Note 2: Please be advised the qualification completion times may be extended because of unforeseen business conditions.

Revision History: November 17, 2022: 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_ALAN-24AINW535_Pre and Post Change_Summary.pdf
PCN_ALAN-24AINW535_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.

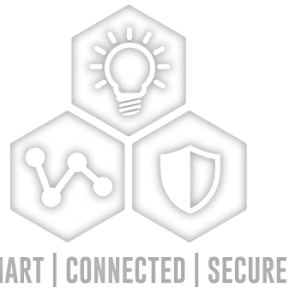
If you wish to change your PCN profile, including opt out, please go to the PCN home page select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

Affected Catalog Part Numbers (CPN)

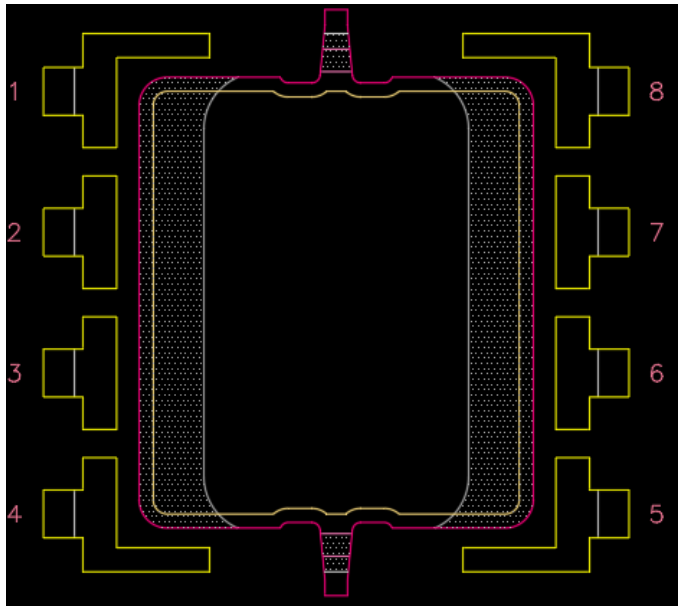
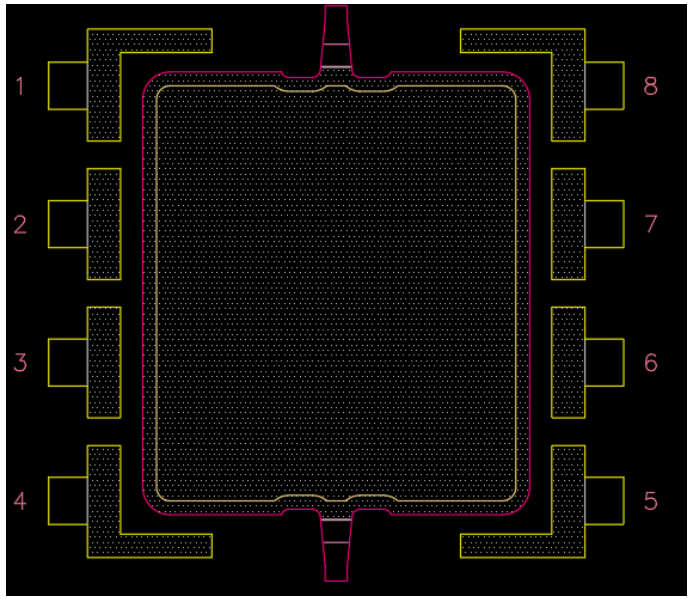
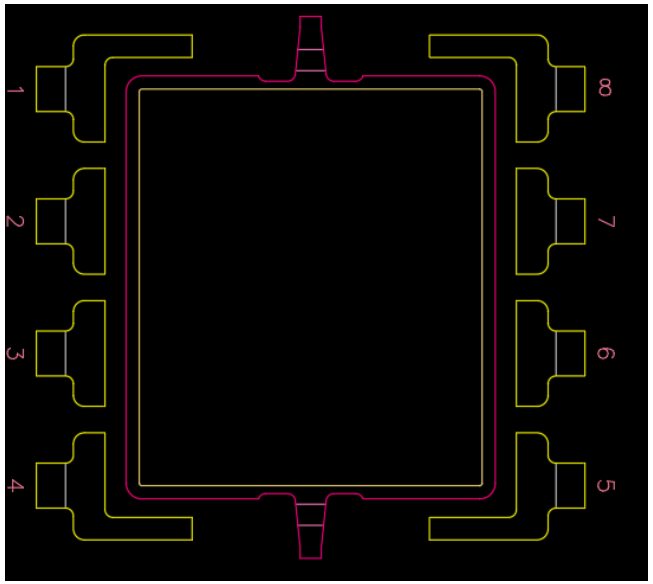
SST26VF016-80-5I-S2AE
SST26VF016-80-5I-S2AE-T

CCB 5336
Pre and Post Change Summary
PCN# ALAN-24AINW535

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



Pre and Post Change Summary

GTK	LPI	MTAI
		

*Not fit to scale

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN# ALAN-24AINW535

Date:
December 10, 2010

Qualification of SST25VF032B-66-4C-S2AE catalog part number (CPN) available in 8L SOIJ (.208 in) package at MTAI assembly site. The qualification of MTAI as a new assembly site for SST26VF016-80-5I-S2AE and SST26VF016-80-5I-S2AE-T catalog part numbers (CPN) available in 8L SOIJ (.208in) package will qualify by similarity (QBS)

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of SST25VF032B-66-4C-S2AE catalog part number (CPN) available in 8L SOIJ (.208 in) package at MTAI assembly site. The qualification of MTAI as a new assembly site for SST26VF016-80-5I-S2AE and SST26VF016-80-5I-S2AE-T catalog part numbers (CPN) available in 8L SOIJ (.208in) package will qualify by similarity (QBS).
CN	BC102473
QUAL ID	Q10094 Rev B
MP CODE	SST25VF032B
Part No.	SST25VF032B-66-4C-S2AE
Bonding No.	BDE-001251 Rev. 2.0
CCB#:	1012 and 5336
Package	
Type	8L SOIJ
Package size	208 mils
Lead Frame	
Paddle size	140 x 160 mils
Material	CDA194
Surface	Ag spot
Process	Stamped
Lead Lock	No
Part Number	10100816
Die attach material	
Epoxy	8390A
Wire	Au wire
Mold Compound	G600V
Plating Composition	Matte Tin

MICROCHIP

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.
A034602	PN50400.00.B
A034603	PN50400.00.B
A034604	PN50400.00.B

Result [x] Pass ☐ Fail ☐ ----

BL SOIJ (.208") assembled by MTAI pass reliability test per SSTQualification plan. This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Microchip Spec	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
MSL								
MSL Level 1/260ºC	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020D)	S12/14/16 (PDC)	66	09/23/10	10/05/10	0/66	Pass	
Precondition								
Electrical Test	Electrical Test :+25°C System: PK2	S12/14/16 (PDC)	1200(0)	09/22/10	09/22/10	1200		Good Devices
Temp Cycle	Stress Condition: -65°C to +150°C, 5 Cycles System : TABAI ESPEC TSA-70H	PI-91020B		09/23/10	09/23/10	1200		
Bake	Bake 150°C, 24 hrs System: CHINEE	PI-92014B		09/23/10	09/24/10	1200		
Moisture Soak	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH	PI-91173B		09/25/10	10/02/10	1200		
Convection-Reflow	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243	PI-91160B		10/02/10	10/02/10	1200		
Electrical Test	Electrical Test :+25°C System: PK2	S12/14/16 (PDC)		10/02/10	10/05/10	0/1200	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Microchip Spec	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
Temp Cycle	**Stress Condition:** -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H Inspection: External crack inspection all units under 40X Optical magnification	PI-91020B QCI-33003	 30(0)	10/07/10 10/19/10	10/19/10 10/19/10	240 0/30		Parts had been pre-conditioned 80 units / lot
	Electrical Test: +25°C System: PK2	S12/14/16 (PDC)	240(0)	10/19/10	10/21/10	0/240	Pass	
	Stress Condition: -65°C to +150°C, 1000 Cycles System : TABAI ESPEC TSA-70H Inspection: External crack inspection all units under 40X Optical magnification	PI-91020B QCI-33003	 30(0)	10/21/10 11/02/10	11/02/10 11/02/10	240 0/30		
	Electrical Test: +25°C System: PK2	S12/14/16 (PDC)	240(0)	11/02/10	11/03/10	0/240	Pass	
Pressure Cooker	**Stress Condition:** +121°C, 100% RH, 15 PSI, 168 hrs. System: HIRAYAMA TPC-422R	PI-92013B		10/07/10	10/18/10	240		Parts had been pre-conditioned
	Electrical Test: +25°C System: PK2	S12/14/16 (PDC)	240(0)	10/18/10	10/18/10	0/240	Pass	80 units / lot

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Microchip Spec	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. System: HAST 6000X	PI-92010B		10/09/10	10/14/10	240		Parts had been pre-conditioned
	Electrical Test: +25°C System: PK2	S12/14/16 (PDC)	240(0)	10/14/10	10/16/10	0/240	Pass	80 units / lot
UNBIASED-HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. System: HAST 6000X	PI-91261B		10/07/10	10/12/10	240		Parts had been pre-conditioned
	Electrical Test: +25°C System: PK2	S12/14/16 (PDC)	240(0)	10/12/10	10/12/10	0/240	Pass	80 units / lot
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	QCI-31003	45 (0)	10/07/10 10/08/10 10/08/10	10/08/10 10/08/10 10/08/10	45 45 0/45	Pass	15 units / lot

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Microchip Spec	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
High Temperature Storage Life	**Stress Condition:** Bake 150°C, 168 hrs System: CHINEE **Electrical Test:** +25°C System: PK2	PI-92014B S12/14/16 (PDC)	240(0)	10/07/10 10/15/10	10/15/10 10/16/10	240 0/240	Pass	Parts had been pre-conditioned
	Stress Condition: Bake 150°C, 500 hrs System: CHINEE **Electrical Test:** +25°C System: PK2	PI-92014B S12/14/16 (PDC)	240 (0)	10/16/10 10/31/10	10/31/10 11/01/10	240 0/240	Pass	80 units / 1 lot
	Stress Condition: Bake 150°C, 1000 hrs System: CHINEE **Electrical Test:** +25°C System: PK2	PI-92014B S12/14/16 (PDC)	240 (0)	10/01/10 11/24/10	11/24/10 11/24/10	240 0240	Pass	
Bond Strength **Data Assembly**	Bond Shear (15.00 grams) Wire Pull (> 2.5 grams)	QCI-91022	30 (0) bonds 30 (0) wires	- -	- -	0/30 0/30	Pass Pass	

QUALIFICATION PLAN SUMMARY

RELIABILITY LABORATORY

PCN# ALAN-24AINW535

Date:
October 24, 2022

Qualification of MTAI as a new assembly site for SST26VF016-80-5I-S2AE and SST26VF016-80-5I-S2AE-T catalog part numbers available in 8L SOIJ (.208in) package.

Purpose: Qualification of MTAI as a new assembly site for SST26VF016-80-5I-S2AE and SST26VF016-80-5I-S2AE-T catalog part numbers available in 8L SOIJ (.208in) package.

Misc.	**Assembly site**	MTAI
	BD Number	BD-001048-01
	MP Code (MPC)	X02017C3XH80 X0201TC3XH80
	Part Number (CPN)	SST26VF016-80-5I-S2AE SST26VF016-80-5I-S2AE-T
	MSL information	1
	Assembly Shipping Media (T/R, Tube/Tray)	Tube / T&R
	Base Quantity Multiple (BQM)	90 / 2100
	Reliability Site	MTAI
	CCB#	5336
Lead-Frame	**Paddle size**	140 x 160 mils
	Material	CDA194
	DAP Surface Prep	Bare Cu
	Treatment	Roughened
	Process	Stamped
	Lead-lock	No
	Part Number	10100840
	Lead Plating	Matte tin
	Strip Size	4R x 28C
	Strip Density	X112
Bond Wire	**Material**	Au
Die Attach	**Part Number**	8390A
	Conductive	Yes
MC	**Part Number**	G600V
PKG	**PKG Type**	SOIJ
	Pin/Ball Count	8
	PKG width/size	208 mils

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	ATE Test Site	REL Test Site	Special Instructions
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0	5	MTAI	MTAI	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5	MTAI	MTAI	30 bonds from a min. 5 devices.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	1	10	0	5	MTAI	MTAI	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	1	ALL	0	5	MTAI	MTAI	
Preconditioning - Required for surface mount devices	JESD22-A113 +150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020E for package type; Electrical test pre and post stress at +25°C and 85 C MSL-1@260 C	231	15	1	246	0	15	MTAI	MTAI	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
HAST	JESD22-A110 +130°C/85% RH for 96 hours or 110°C/85%RH for 264 hours. Electrical test pre and post stress at +25°C and 85C. Max temp testing at 85C.	77	5	1	82	0	10	MTAI	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UHAST	JESD22-A118 +130°C/85% RH for 96 hrs. or +110°C/85% RH for 264 hrs. Electrical test pre and post stress at +25°C	77	5	1	82	0	10	MTAI	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22-A104 -65°C to +150°C for 500 cycles. Electrical test pre and post stress at 25C and 85C; 3-gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress. Max temp testing at 85C.	77	5	1	82	0	15	MTAI	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.