Product Change Notification / ASER-06ZMCM207

Date:

15-Nov-2021

Product Category:

Ethernet Controllers, Ethernet Switches

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4630 Final Notice: Qualification of STA as an additional assembly site for selected LAN9303, LAN9210 and LAN9211 device families available in 56L VQFN (8x8x0.9mm) package.

Affected CPNs:

ASER-06ZMCM207_Affected_CPN_11152021.pdf
ASER-06ZMCM207_Affected_CPN_11152021.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 STA as an additional assembly site for selected LAN9303, LAN9210 and LAN9211 device families available in 56L VQFN (8x8x0.9mm) package.

Pre and Post Change Summary:

	Pre Change	**Post Change**	
Assembly Site	ASE Inc. (ASE)	ASE Inc. (ASE)	STATS Chippac Ltd. (STA)

Wire material	PdCu	Au	PdCu	Au	CuPdAu
Die attach material	EN-4900F		EN-4900F		8290
Molding compound material	G631B		G631B		G700E
Lead frame material	C194		C194		C194
Lead frame lead-lock	No		No		No
	See Pre and Post Change Summary for comparison.				
Lead frame paddle size	240x240 mils		240x240 mils		236x236 mils

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve manufacturability by qualifying STA as an additional 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:

	April 2021					->	October 2021				
Workweek	14	15	16	17	18		41	42	43	44	45
Initial PCN			X								
Qual Report Availability											
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:
April 14, 2021: Issued initial notification.
October 11, 2021: Issued final notification. Updated the Pre Change field for wire material to include Au (gold) and corrected the Post Change for lead frame lead-lock from Yes to No. Updated the notification subject, description of change and affected CPN list to include LAN9210 and LAN9211 device families. Provided estimated first ship date to be on October 31, 2021.
November 15, 2021: Re-issued final notification. Attached the qualification report.

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-06ZMCM207_Qual_Report.pdf
PCN_ASER-06ZMCM207_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.

CCB 4630
Pre and Post Change Summary
PCN #: ASER-06ZMCM207

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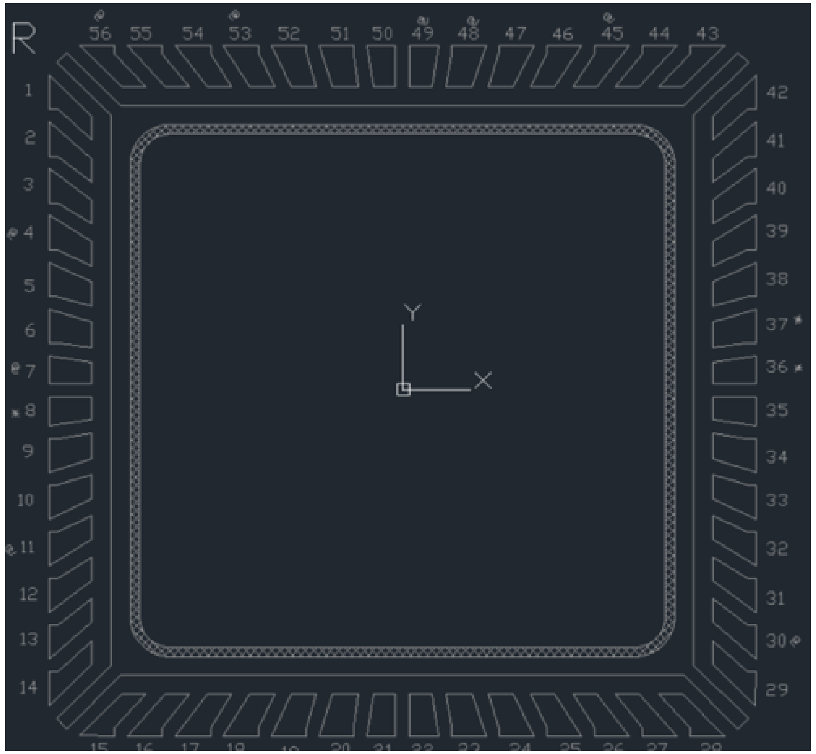
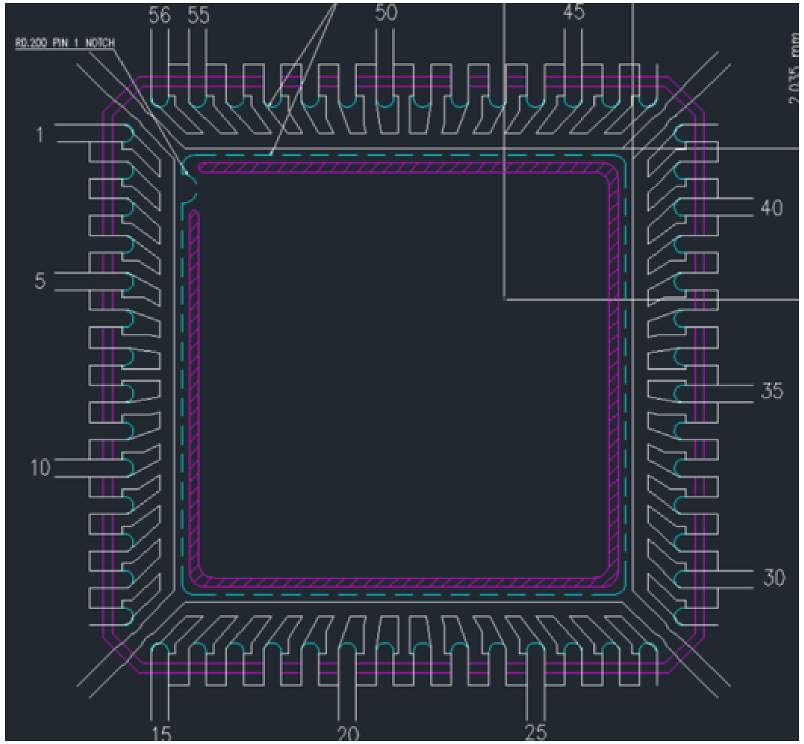
SMART | CONNECTED | SECURE

Lead frame Comparison

ASE	STA
	

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN#: ASER-06ZMCM207

Date
November 2, 2021

Qualification of STA as an additional assembly site for selected LAN9303, LAN9210 and LAN9211 device families available in 56L VQFN (8x8x0.9mm) package.

PACKAGE QUALIFICATION REPORT

Purpose	**Qualification of STA as an additional assembly site for selected LAN9303, LAN9210 and LAN9211 device families available in 56L VQFN (8x8x0.9mm) package.**
CN	ES361355
QUAL ID	R2100817
MP CODE	TA3017RTXB0C
Part No.	LAN9303I-ABZJ
Bonding No.	BDM-002969 Rev. A
Package	
Type	56L VQFN
Package size	8 x 8 x 0.9 mm
Lead Frame	
Paddle size	236 x 236 mils
Material	C194
Surface	Double Ring
Process	Etched
Lead Lock	No
Part Number	R002-3646X
Material	
Epoxy	8290
Wire	CuPdAu wire
Mold Compound	G700E
Plating Composition	Matte Sn

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
STA-221300006.000	TC11922050505.100	2125YMV
STA-221300008.000	TC11922050505.100	2125YPR
STA-221300007.000	TC11922050505.100	2125YPH

Result ☒ Pass ☐ Fail ☐ ____________________

56L VQFP (8x8x0.9 mm) assembled by STA 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 100°C System: EX_ANALOG	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 100°C System: EX_ANALOG			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: +100°C System: EX_ANALOG		231(0)	0/231	Pass	77 units / lot
	Stress Condition: -65°C to +150°C, 1000 Cycles System: TABAI ESPEC TSA-70H			231		
	Electrical Test: +100°C System: EX_ANALOG		231(0)	0/231	Pass	
	Bond Strength: Wire Pull (> 2.50 grams)		15 (0)	0/15	Pass	
	Bond Shear (>12.60 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: EX_ANALOG		231(0)	0/231	Pass	77 units / lot
	Stress Condition: +130°C/85%RH, 192 hrs. System: HAST 6000X			231		
	Electrical Test: +25°C System: EX_ANALOG		231(0)	0/231	Pass	

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 100°C System: EX_ANALOG	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 (> 3.00 grams) Bond Shear (> 8.00 grams)	Mil. Std. 883-2011 CDF-AEC-Q100-001	30 (0) Wires 30 (0) bonds	0/30 0/30	Pass Pass	

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Affected Catalog Part Numbers(CPN)

LAN9303-ABZJ
LAN9303I-ABZJ
LAN9303I-ABZJ-TR
LAN9211-ABZJ
LAN9210-ABZJ