Product Change Notification / ASER-24QQEH990

Date:

07-Jul-2021

Product Category:

Ethernet PHYs

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4753 Final Notice: Qualification of STA as an additional assembly site for selected LAN8710Axxx device family available in 32L VQFN (5x5x0.9mm) package.

Affected CPNs:

ASER-24QQEH990_Affected_CPN_07072021.pdf
ASER-24QQEH990_Affected_CPN_07072021.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 LAN8710Axxx device family available in 32L VQFN (5x5x0.9mm) package.

Pre and Post Change Summary:

	Pre Change		**Post Change**		
Assembly Site	ASE Inc. (ASE)	Amkor Assembly & Test (Shanghai) Co., LTD (ANAC)	ASE Inc. (ASE)	Amkor Assembly & Test (Shanghai) Co., LTD (ANAC)	STATS Chippac Ltd. (STA)

Wire material	CuPd	CuPd	CuPd	CuPd	CuPdAu
Die attach material	EN-4900F	8290	EN-4900F	8290	Ablebond 8290
Molding compound material	G631B	G700	G631B	G700	G700E
DAP Surface Prep	Double Ring Plating	Ag Double Ring	Double Ring Plating	Ag Double Ring	Ring Plating
Lead frame material	C194	C194	C194	C194	C194
Lead-lock (with locking holes)	No	Yes	No	Yes	No
	See Pre and Post Change Summary for comparison.				

Impacts to Data Sheet: None

Change Impact: None

Reason for Change: To improve on-time delivery performance by qualifying STA as an additional assembly site.
Change Implementation Status: In Progress

Estimated First Ship Date:
July 31, 2021 (date code: 2131)

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

Time Table Summary:

	July 2021				
Workweek	27	28	29	30	31
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:
July 7, 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_ASER-24QQEH990_Pre and Post Change Summary.pdf
PCN_ASER-24QQEH990_Qual Report.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.

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: ASER-24QQEH990

Date:
December 27, 2011

Qualification of STA as an additional assembly site for selected LAN8710Axxx device family available in 32L VQFN (5x5x0.9mm) package. This is a qualification by similarity (QBS)

Purpose: Qualification of STA as an additional assembly site for selected LAN8710Axxx device family available in 32L VQFN (5x5x0.9mm) package. This is a qualification by similarity (QBS).

CCB: 4753

PRODUCT INFORMATION

PACKAGE	5X5X0.85mm (32 QE3)
WAFER LOT NO	6STG39199.1
WAFER ID	136002A2
BOND PAD SIZE	50 um
BOND PAD PITCH	43 um
UNITS PER STRIP	24X9=215
LEAD PITCH	0.5 mm
FOUNDRY	CST (Fab 6)

MATERIAL INFORMATION

LEAD FRAME MATERIAL	C194 1/2H
LEAD FRAME PLATING	Ag (Ring plating) / Etched
LEADFRAME SIZE	3.5 X 3.5 mm
DIE ATTACH EPOXY TYPE	8290
WIRE PURITY	4N Cu + Pd Coat CLR-1
MOLDING COMPOUND TYPE	G700E
LEAD FINISHING PROCESS	Solder Plating
LEAD FINISHING COMPOSITION	Pure Tin
MARKING INK	Laser

Assembly Process Data

Process	Test Item	Criteria	Sample Size	Failure/Tested Qty.	Remarks Pass.Fail
Wafer Saw	Topside chipping	50% max of damage the guard ring	45 units/lot	0/45	Pass
	Backside chipping	125µm max	45 units/lot	0/45	Pass
Die Attach	Epoxy Void	10% max of die area	10 units/lot	0/10	Pass
	Bond Line	5-30µm	10 units/lot	0/10	Pass
Wirebond	Wirepull	2 gr. Min	17 wires/units 12 units	0/204	Pass
	Ball Shear	10 gr. Min	15 ball/units 10 units	0/150	Pass
	Loop Height	200 µm Max.	2 wires/units 10 units	0/20	Pass
	Cratering	0 defects	6 units/lot all pads	0/6	Pass
	Intermetallic Test	60% min. Coverage	6 units/lot all pads	0/6	Pass
Mold	Wiresweep	10% max of longest wire	10 units/lot	0/10	Pass
Singulation	Package Dim	5+/-0.1mm	10 readings	0/10	Pass
		5+/-0.1mm	10 readings	0/10	Pass
Plating Thickness	Thickness	10-18µm	20 readings	0/20	Pass

SUMMARY RESULT OF RELIABILITY TEST

ITEM	**CONDITION**	**BEFORE PRECONDITIONING**		**AFTER PRECONDITIONING**	
		O/S TEST	**SAT**	**O/S TEST**	**SAT**
PRECONDITIONING	**30^{0}C / 60% RH 192 HRS, Level 3 per Jedec**	**0/240**	**0/240**	**0/240**	**0/240**
TEST ITEM (With Pre-Condition)	**TEST CONDITION**	**TEST INTERVAL**		**VISUAL INSPECTION**	**O/S TEST**
TEMPERATURE CYCLE TEST	JEDEC 22-A104 -65’C~150’C	1000/1500 CYC		0/60	0/60
HIGH TEMPERATURE STORGE TEST	JEDEC 22-A103 150’C	1000/1500 HRS		0/60	0/60
HAST TEST (NO BIAS)	JEDEC 22-A118 130’C/85%RH 33.5PSIG	100/150 HRS		0/60	0/60
TEMPERATURE HUMIDITY TEST (NO BIAS)	JEDEC 22-A101 85’C/85%RH	1000/1500 HRS		0/60	0/60

CCB 4753
Pre and Post Change Summary
PCN #: ASER-24QQEH990

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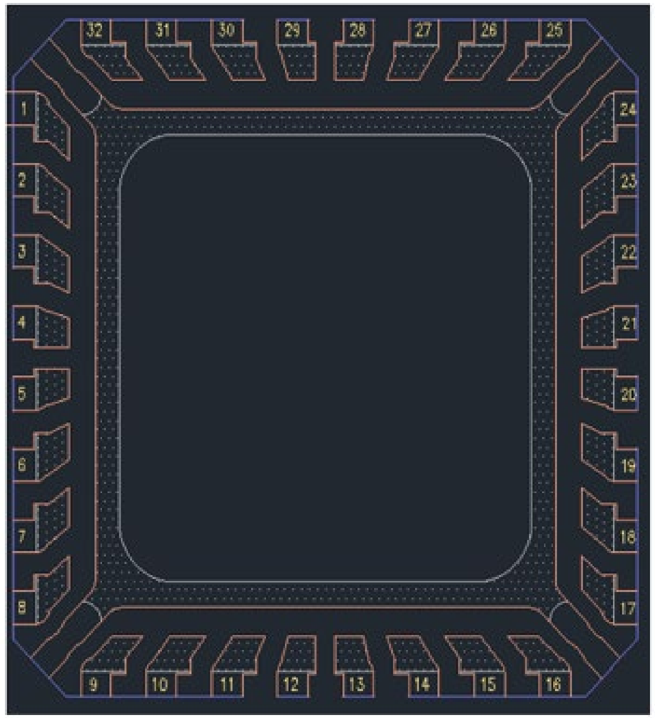
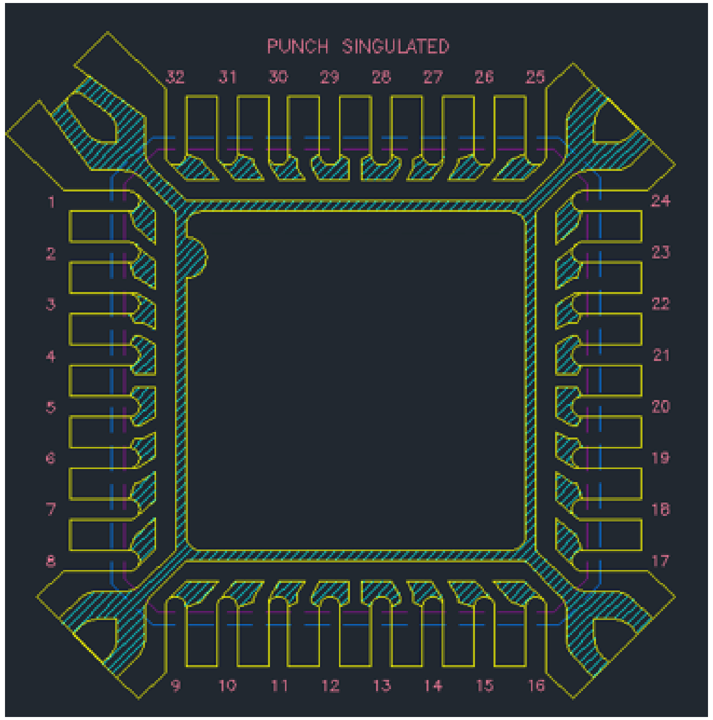
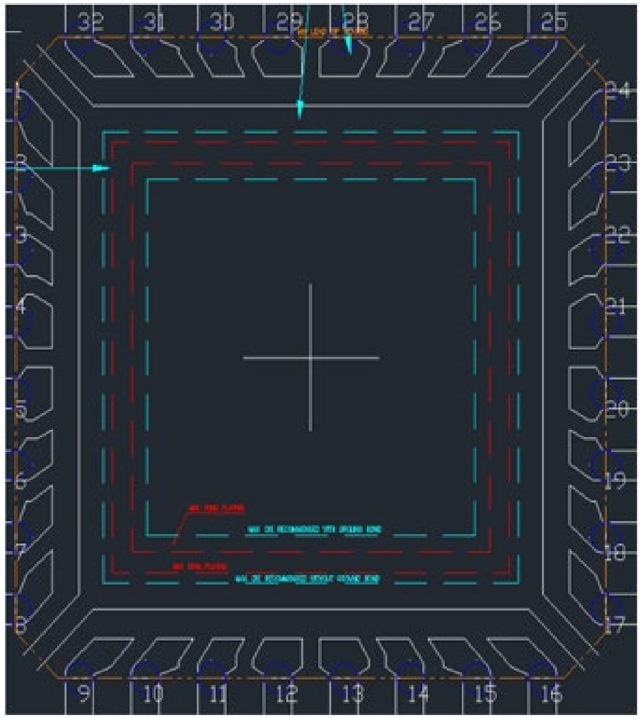
Qualification of STA as an additional assembly site for selected LAN8710Axxx device family available in 32L VQFN (5x5x0.9mm) package.

Lead Frame Comparison Comparison

ASE	ANAC	STA
		

Affected Catalog Part Numbers (CPN)

LAN8710A-EZC
LAN8710A-EZK
LAN8710AI-EZK
LAN8710A-EZK-TR
LAN8710A-EZC-TR
LAN8710AI-EZK-TR