Product Change Notification / MFOL-04PKQY369

Date:

14-Oct-2022

Product Category:

USB Transceivers

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4630.002 Final Notice: Qualification of STA as an additional assembly site for USB3340-EZK, USB3340-EZK-TR, USB3370B-EZK and USB3370B-EZK-TR catalog part numbers (CPN) available in 32L VQFN (5x5x0.9mm) package.

Affected CPNs:

MFOL-04PKQY369_Affected_CPN_10142022.pdf
MFOL-04PKQY369_Affected_CPN_10142022.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 USB3340-EZK, USB3340-EZK-TR, USB3370B-EZK and USB3370B-EZK-TR catalog part numbers (CPN) available in 32L VQFN (5x5x0.9mm) package.

Pre and Post Change Summary:

	Pre Change	**Post Change**	
Assembly Site	ASE Inc. (ASE)	ASE Inc. (ASE)	STATS Chippac Ltd. (STA)
Wire Material	CuPd	CuPd	CuPdAu
Die Attach Material	EN-4900F	EN-4900F	8290
Molding Compound Material	G631B	G631B	G700E
Lead-Frame Material	C194	C194	C194
Lead-Frame Paddle Size	138X138 mils	138X138 mils	138X138 mils
DAP Surface Prep	Double Ring Plating	Double Ring Plating	Ring Plating
	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: November 16, 2022 (date code: 2247)

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

Time Table Summary:

	October 2022					**November 2022**				
Workweek	40	41	42	43	44	45	46	47	48	49
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:
October 06, 2022: Issued final notification.
October 14, 2022: Re-issued final notification to remove the tray comparison drawing in pre and post change summary.

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

Attachments:

PCN_MFOL-04PKQY369 Pre and Post Change Summary.pdf
PCN_MFOL-04PKQY369_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 ID#: MFOL-04PKQY369

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. The selected USB3340-EZK, USB3340-EZK-TR, USB3370B-EZK and USB3370B-EZK-TR catalog part numbers (CPN) available in 32L VQFN (5x5x0.9mm) package will qualify by similarity (QBS).

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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. The selected USB3340-EZK, USB3340-EZK-TR, USB3370B-EZK and USB3370B-EZK-TR catalog part numbers (CPN) available in 32L VQFN (5x5x0.9mm) package will qualify by similarity (QBS).
CCB	4630.002 and 4630
CN	ES361355
QUAL ID	R2100817 REV. A
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

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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 VQFN (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			693		
	System: Vitronics Soltec MR1243					
	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)	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	

CCB 4630.002
Pre and Post Change Summary
PCN# MFOL-04PKQY369

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SMART | CONNECTED | SECURE

Lead Frame Comparison

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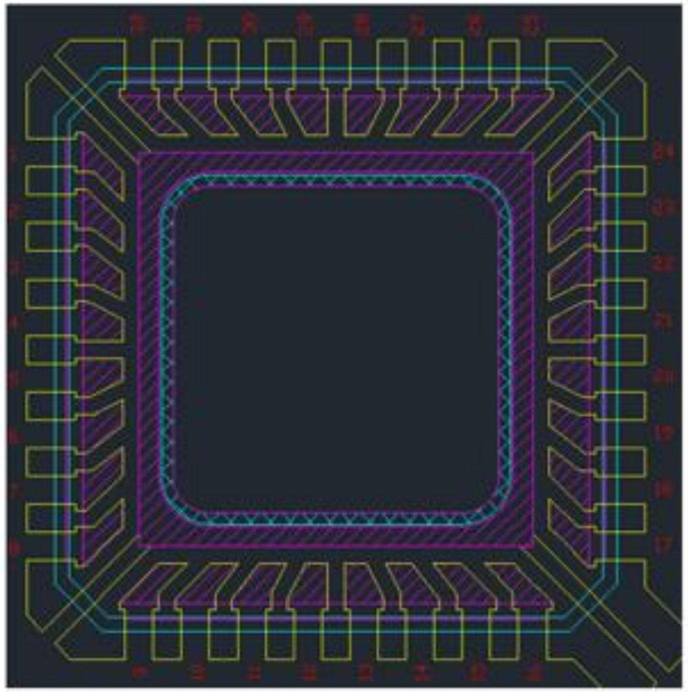
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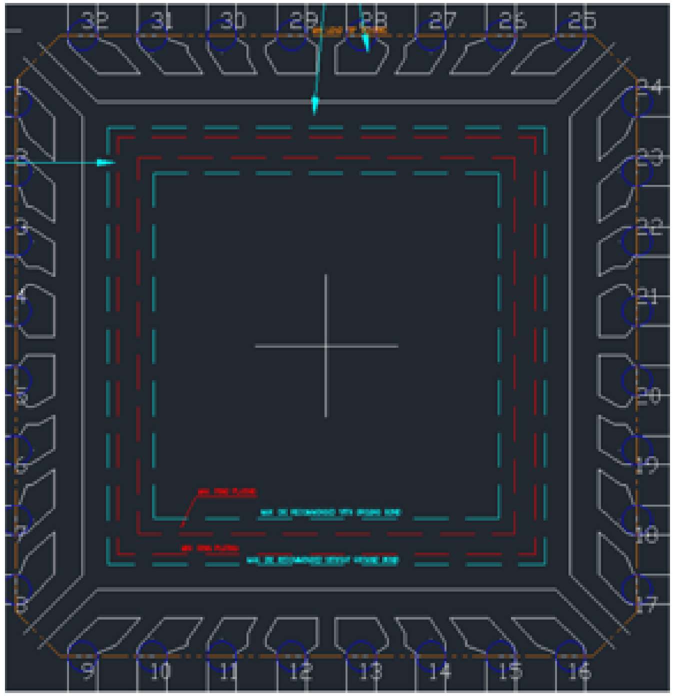

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MFOL-04PKQY369 - CCB 46 USB3340-E USB3370B-EZK and USB3370B-EZK-TR catalog part numbers (CPN) av

Affected Catalog Part Numbers(CPN)

USB3340-EZK
USB3340-EZK-TR
USB3370B-EZK
USB3370B-EZK-TR