Product Change Notification / JAON-27EDPR425

Date:

14-Apr-2021

Product Category:

Bluetooth Silicon

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4329 and 4329.001 Final Notice: Qualification of MMT as a new assembly site for IS1870SF and IS1871SF device families available in 32L VQFN (4x4x0.9mm) and 48L VQFN (6x6x0.9mm) packages.

Affected CPNs:

JAON-27EDPR425_Affected_CPN_04142021.pdf
JAON-27EDPR425_Affected_CPN_04142021.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 MMT as a new assembly site for IS1870SF and IS1871SF device families available in 32L VQFN (4x4x0.9mm) and 48L VQFN (6x6x0.9mm) packages.

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	ASE Group Chung-Li	Microchip Technology Thailand Branch

	(ASCL)	(MMT)
Bond Wire material	PdCu	CuPdAu
Die attach material	EN-4900	3280
Molding compound material	G700	G700
Lead frame material	A194	A194
MSL Level	MSL 3	MSL 1

Impacts to Data Sheet: None

Change Impact: None

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

Change Implementation Status: In Progress

Estimated First Ship Date:
May 14, 2021 (date code: 2120)

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

Time Table Summary:

	August 2020					-->	**April 2021**					**May 2021**				
Workweek	32	33	34	35	36		14	15	16	17	18	19	20	21	22	23
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:August 10, 2020: Issued initial notification.

April 14, 2021: Issued final notification. Attached the Qualification Report. Revised the affected parts list. Provided estimated first ship date to be on May 14, 2021.

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

Attachments:

PCN_JAON-27EDPR425_Qual_Report.pdf

Please contact your local Microchip sales office with questions or concerns regarding this notification.

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QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN# JAON-27EDPR425

Date
March 03, 2021

Qualification of MMT as a new assembly site for IS1870SF and IS1871SF device family available in 48L VQFN (6x6x0.9mm) packages. The selected products available 32L VQFN (4x4x0.9mm) package will qualify by similarity (QBS).

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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of MMT as a new assembly site for IS1870SF and IS1871SF device family available in 48L VQFN (6x6x0.9mm) packages. The selected products available 32L VQFN (4x4x0.9mm) package will qualify by similarity (QBS).
CN	ES348345
QUAL ID	R2000743 Rev A.
MP CODE	STF014VNXB02
Part No.	IS1870SF-202-TRAY
Bonding No.	BDM-002371 Rev. A
CCB No.	4329 and 4329.001

Package

Type	48L VQFN
Package size	6 x 6 x 0.9 mm

Lead Frame

Paddle size	181 x 181 mils
Material	A194
Surface	Double ring
Process	Etched
Lead Lock	No
Part Number	10104814

Material

Epoxy	3280
Wire	CuPdAu wire
Mold Compound	G700LTD
Plating Composition	Matte Sn

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PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-212000002.000	TC14917492241.120	2033TU2
MMT-212001649.000	TC14917492241.120	203376Q
MMT-212001650.000	TC14917492241.120	203376R

Result ☒ Pass ☐ Fail ☐ ________________

48L VQFN (6x6x0.9 mm) assembled by MMT pass reliability test per QCI-39000.This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 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 1)	**Electrical Test:** +25°C System: V93K-PS400	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE	JIP/ IPC/JEDEC J-STD-020E		693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max			693		
	System: Vitronics Soltec MR1243					
	Electrical Test: +25°C System: V93K-PS400			0/693	Pass	
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: +25°C System: V93K-PS400		231(0)	0/231	Pass	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	JESD22-A118		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: V93K-PS400		231(0)	0/231	Pass	77 units / lot
High Temperature Storage Life	**Stress Condition:** Bake 175°C, 504 hrs System: SHEL LAB	JESD22-A103		45		45 units
	Electrical Test: +25°C System: V93K-PS400		45(0)	0/45	Pass	
Bond Strength	Wire Pull (> 2.5 grams)	Mil.Std. 883-2011	30 (0) Wires	0/30	Pass	
Data Assembly	Bond Shear (> 10.00 grams)	CDF-AEC-Q100-001	30 (0) bonds	0/30	Pass	

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Affected Catalog Part Numbers(CPN)

IS1871SF-202-TRAY
IS1870SF-202-TRAY
IS1871SF-102-TRAY
IS1870SF-102-TRAY
IS1871SF-102
IS1871SF-202
IS1870SF-102
IS1870SF-202