



Product Change Notification / MFOL-28UNFU344

Date:

13-Dec-2022

Product Category:

Car Access, Wireless IC

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5003 Final Notice: Qualification of FH-SC13/HR-5104 as new die attach material and G700LTD mold compound for selected Atmel ATA5577M1330C-UFQW and ATA5577M133DC-UFQW catalog part numbers (CPN) available in 2L XDFN (1.5x2x0.37mm) package at NSEB assembly site.

Affected CPNs:

[MFOL-28UNFU344_Affected_CPN_12132022.pdf](#)

[MFOL-28UNFU344_Affected_CPN_12132022.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 FH-SC13/HR-5104 as new die attach material and G700LTD mold compound for selected Atmel ATA5577M1330C-UFQW and ATA5577M133DC-UFQW catalog part numbers (CPN) available in 2L XDFN (1.5x2x0.37mm) package at NSEB assembly site.

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	UTAC Thai Limited (UTL-1) LTD. (NSEB)	UTAC Thai Limited (UTL-1) LTD. (NSEB)
Wire Material	Au	Au
Die Attach Material	HS-261W	FH-SC13/HR-5104
Molding Compound Material	CEL-8240HF10G	G700LTD
Lead-Frame Material	EFTEC-64T	EFTEC-64T
Lead-Frame Paddle Size	50x31 mils	50x31 mils
DAP Surface Prep	Copper (Ag custom)	Copper (Ag custom)

Impacts to Data Sheet:None

Change Impact:None

Reason for Change:To improve productivity and on-time delivery performance by qualifying FH-SC13/HR-5104 as new die attach material and G700LTD mold compound at NSEB assembly site.

Change Implementation Status:In Progress

Estimated First Ship Date:January 15, 2023 (date code: 2303)

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

Time Table Summary:

	March 2022					>	December 2022					January 2023				
Workweek	10	11	12	13	14		49	50	51	52	53	01	02	03	04	05
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:

March 09, 2022: Issued initial notification.

December 13, 2022: Issued final notification. Attached the qualification report and added estimated first ship date by January 15, 2023.

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-28UNFU344_Qual_Report.pdf](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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MICROCHIP

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN# LIAL-07RPOQ740

Date
November 25, 2022

Qualification of a new lead frame with more Ag area on DAP surface prep for selected KSZ8081 and KSZ8091 device families available in 32L VQFN (5x5x0.9mm) package assembled at MTAI assembly site.



MICROCHIP PACKAGE QUALIFICATION REPORT

Purpose Qualification of a new lead frame with more Ag area on DAP surface prep for selected KSZ8081 and KSZ8091 device families available in 32L VQFN (5x5x0.9mm) package assembled at MTAI assembly site.

CN E000107074
QUAL ID R2200733 Rev A
MP CODE XKAA19PFAVA2
Part No. KSZ8051MNLV-VAO
Bonding No. BD-000677 Rev.02
CCB 5135

Package

Type 32L VQFN
Package size 5 x 5 x 0.9 mm

Lead Frame

Paddle size 150 x 150 mils
Material A194
Surface Ag selective plating (Add more Ag area)
Process Etched
Lead Lock Yes
Part Number 10103214

Material

Epoxy 3280
Wire Au/2N
Mold Compound G700LTD
Plating Composition Matte Sn



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information:

Assembly Lot No.	Wafer Lot No.	Date Code
MTAI230601567.000	DU02922523132.430	2219PAK
MTAI230601935.000	DU02922523132.430	2219Q83
MTAI230601936.000	DU02922523132.430	2219Q8D

Result

Pass Fail _____

32L VQFN (5x5x0.9 mm) assembled by MTAI pass reliability test per QCI-39000.
This package was qualified the Moisture/Reflow Sensitivity Classification Level 2 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 2)	Electrical Test: +25°C, 105°C and -43°C System: Chroma / SMB600	JESD22-A113	693(0)	0/693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE	JIP/ IPC/JEDEC J-STD-020E		0/693		
	85°C/60%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max			0/693		
	System: Vitronics Soltec MR1243			0/693		
Electrical Test: +25°C and 105°C System: Chroma / SMB600		693(0)	0/693	Pass		
Temp Cycle	Stress Condition: -55°C to +125°C, 1000 Cycles System: TABAI ESPEC TSA-70H	JESD22-A104		0/231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C and 105°C System: Chroma		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (>2.50 grams) Bond Shear (>15.00 grams)		15(0) 15(0)	0/15 0/15	Pass Pass	
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		0/231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: SMB600		231(0)	0/231	Pass	77 units / lot
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 3.3 Volts System: HAST 6000X	JESD22-A110		0/231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C and 105°C System: Chroma / SMB600		231(0)	0/231	Pass	77 units / lot

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<p style="text-align: center;">High Temperature Storage Life</p>	<p>Stress Condition: Bake 150°C, 500 hrs. System: SHEL LAB</p>	<p>JESD22- A103</p>		0/45		
	<p>Electrical Test: +25°C and 105°C System: Chroma / SMB600</p>		45(0)	0/45	Pass	
<p>Bond Strength Data Assembly</p>	<p>Wire Pull (>2.50 grams)</p>	<p>Mil. Std. 883-2011</p>	<p>30(0) Wires</p>	0/30	Pass	
	<p>Bond Shear (>15.00 grams)</p>	<p>CDF-AEC- Q100-001</p>	<p>30(0) bonds</p>	0/30	Pass	

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Affected Catalog Part Numbers (CPN)

ATA5577M1330C-UFQW

ATA5577M133DC-UFQW

CCB#: 5135
Pre and Post Change Summary
PCN #: LIAL-07RPOQ740



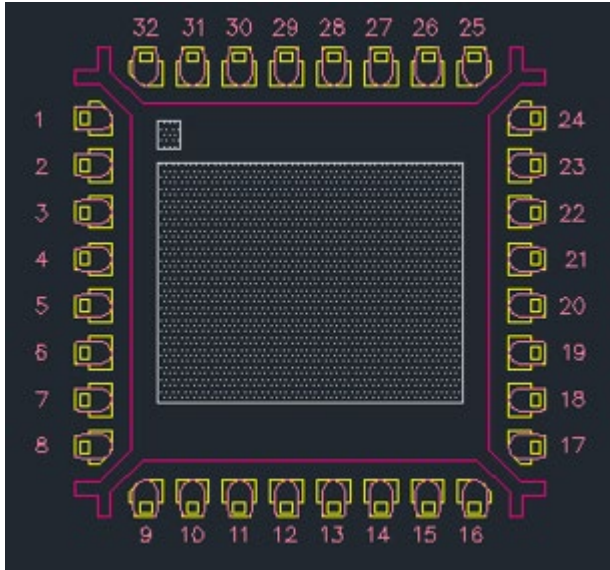
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SMART | CONNECTED | SECURE

Lead Frame Comparison

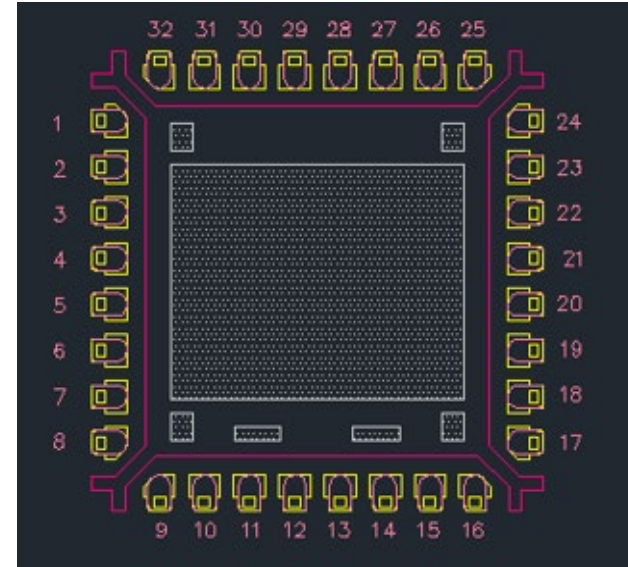
Pre Change



Lead frame DAP surface prep

Ag selective plating

Post Change



Lead frame DAP surface prep

Ag selective plating
(Add more Ag area)