

Product Change Notification: GDOS-04EWFZ700

Date:

10-Feb-2025

Product Category:

Crypto Memory

Notification Subject:

CCB 6792 Final Notice: Qualification of MTAI as an additional assembly site for selected AT88SC0104CA, AT88SC0204CA, AT88SC0404CA and AT88SC0808CA device families available in 8L SOIC (.150in) package using CuPdAu wire.

Affected CPNs:

GDOS-04EWFZ700_Affected_CPN_02102025.pdf GDOS-04EWFZ700_Affected_CPN_02102025.csv

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 MTAI as an additional assembly site for selected AT88SC0104CA, AT88SC0204CA, AT88SC0404CA and AT88SC0808CA device families available in 8L SOIC (.150in) package using CuPdAu wire.

Pre and Post Summary Changes:

	Pre Change	Post Change				
Assembly Site	ATX Semiconductor (Shanghai)Co. Ltd (ASSH)	ATX Semiconduc tor (Shanghai)C o. Ltd	Microchip Technology Thailand (HQ) (MTAI)			

			(ASSH)		
Wire Material	Au	PdCu	Au	PdCu	CuPdAu
Die Attach Material	EN-4900G		EN-4	1900G	QMI-519
Molding Compound Material	G700LY		G70	OLY	G600V
Lead-Frame Material*	C194		C194	1	C194
DAP Surface Prep	PPF		PPF		Bare Cu
Lead Plating	NiPdAu		NiPdAu		Matte tin
Lead-Frame Design	See Pre and Post Change Summary for Comparison				

*Note: C194, A194 or CDA194 Lead frame material are the same, it is just a MCHP internal labelling difference

Impacts to Datasheet: None

Change Impact: None

Reason for Change: To improve on-time delivery performance by qualifying MTAI as an additional assembly site.

Change Implementation Status: In Progress

Estimated First Ship Date: 11 March 2025 (date code: 2511)

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

Timetable Summary:

February 2024	>	February 2025	March 2025	
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Work Week	05	06	07	80	09	05	06	07	08	09	10	11	12	13	14
Initial PCN Issue Date		Х													
Qual Report Availability								Х							
Final PCN Issue Date								Х							
Estimated Implementation Date												Х			

Method to Identify Change: Traceability Code

Qualification Report: Please open the attachments included with this PCN labeled as PCN_#_Qual_Report.

Revision History: February 07, 2024: Issued initial notification. February 10, 2025: Issued final notice. Attached the Qualification Report. Provided estimated first ship date to be on March 11, 2025.

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

Attachments:

PCN_GDOS-04EWFZ700_Pre_and_Post_Change_Summary.pdf PCN_GDOS-04EWFZ700_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 <u>change your PCN profile</u>, <u>including opt out</u>, 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.

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Affected Catalog Part Numbers (CPN)

AT88SC0104CA-SH AT88SC0104CA-SH-AT88SC0204CA-SH AT88SC0204CA-SH-AT88SC0404CA-SH AT88SC0404CA-SH-T AT88SC0808CA-SH-AT88SC0808CA-SH-T



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Pre and Post Change Summary - Lead Frame Comparison



*Note: Not fit to scale





QUALIFICATION REPORT SUMMARY RELIABILITY LABORATORY

PCN #: GDOS-04EWFZ700

Date: January 30, 2025

Qualification of MTAI as an additional assembly site for selected AT88SC0104CA, AT88SC0204CA, AT88SC0404CA and AT88SC0808CA device families available in 8L SOIC (.150in) package using CuPdAu wire.



Purpose	Qualification of MTAI as an additional assembly site for selected AT88SC0104CA, AT88SC0204CA, AT88SC0404CA and AT88SC0808CA device families available in 8L SOIC (.150in) package using CuPdAu wire.
CN	E000219330
QUAL ID	R2401465 Rev. A
MP CODE	569127C2XQUL
Part No.	56912-MTAI-QUAL-SU
Bonding No.	BD-001964 Rev. 03
CCB No.	6792
Package	
Туре	8L SOIC
Package size	150 mils
Lead Frame	
Paddle size	90 x 90 mils
Material	CDA194
Surface	Bare Cu
Process	Stamped
Lead Lock	No
Part Number	10100812
Treatment	BOT
<u>Material</u>	
Ероху	QMI519
Wire	CuPdAu
Mold Compound	G600V
Plating Composition	Matte Sn



Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MTAI244700949.000	MCSO524087641.410	2408KQU
MTAI244801579.000	MCSO524087641.410	2409TY6
MTAI244900339.000	MCSO524087641.410	2410WMK

Result

X Pass

Fail

8L SOIC (150 mils) assembled by MTAI 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 QUALIFIC	ATION	REP	ORT		
Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Precondition Prior Perform Poliability Tooto	Electrical Test: +25°C and 85°C System: NEXTEST_PT	JESD22- A113	693(0)	0/693	Pass	Good Devices
(At MSL Level 1)	Bake 150°C, 24 hrs. System: CHINEE	JIP/ IPC/JEDEC		693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH	J-STD-020E		693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test: +25°C and 85°C System: NEXTEST_PT		693(0)	0/693	Pass	

PACKAGE QUALIFICATION REPORT									
Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks			
	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			
Temp Cycle	Electrical Test: + 85°C System: NEXTEST_PT		231(0)	0/231	Pass	77 units / lot			
	Bond Strength: Wire Pull (>2.50 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: NEXTEST_PT		231(0)	0/231	Pass	77 units / lot			
	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 3.6 Volts System: HAST 6000X	JESD22- A110		231		Parts had been pre-conditioned at 260°C			
HAST	Electrical Test: +25°C and 85°C System: NEXTEST_PT		231(0)	0/231	Pass	77 units / lot			

PACKAGE QUALIFICATION REPORT									
Test Number	Test Condition	Standard/	Qty.	Def/SS.	Result	Remarks			
(Reference)		Method	(Acc.)						
High Temperature	Stress Condition: Bake 175°C, 504 hrs. System: TPS Bake Oven	JESD22- A103		135		45 units /lot			
Storage Life	Electrical Test: +25°C and 85°C System: NEXTEST_PT		135(0)	0/135	Pass				
Solderability	Steam Aging: Temp 93°C,8Hrs System: SAS-3000 Solder Dipping: Solder Temp.245°C Solder material: Pb Free Sn 95.5Ag3.9	J-STD-002		0/22					
	Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection		22(0)	0/22	Pass				
Bond Line Thickness	Bond Line Thickness	SPI-45528	15(0)	15(0)	Pass	5 units / lot			
Wire sweep	Wire sweep Inspection 15 Wires / lot	-	45(0) Wires	0/45	Pass				
Physical	Physical Dimension,	JESD22-	30(0)	0/30	Pass				
Dimensions	10 units / 1 lot	Б100/Б108	Units						
Bond Strength	Wire Pull (>2.50 grams)	Mil. Std. 883-2011	30(0) Wires	0/30	Pass				
Data Assembly	Bond Shear (>15.00 grams)	CDF-AEC- Q100-001	30(0) bonds	0/30	Pass				