Product Change Notification: MAAN-24WWNV902

Date:

10-Jun-2025

Product Category:

32-Bit Microcontrollers

Notification Subject:

CCB 6777.001 Final Notice: Qualification of ANAP as an additional assembly site for selected ATSAM4S16B, ATSAM4S8B, ATSAM4SA16B, ATSAM4S2B, ATSAM4N16B, ATSAM4SD16B, ATSAM4N8B, ATSAM4SD32B and ATSAM4S4B device families available in 64L LQFP (10x10x1.4mm) package.

Affected CPNs:

MAAN-24WWNV902_Affected_CPN_06102025.pdf
MAAN-24WWNV902_Affected_CPN_06102025.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 ANAP as an additional assembly site for selected ATSAM4S16B, ATSAM4S8B, ATSAM4SA16B, ATSAM4S2B, ATSAM4N16B, ATSAM4SD16B, ATSAM4N8B, ATSAM4SD32B and ATSAM4S4B device families available in 64L LQFP (10x10x1.4mm) package.

Pre and Post Summary Changes:

	Pre Change	**Post Change**	
Assembly Site	ATX Semiconductor (Shanghai) Co. Ltd (ASSH)	ATX Semiconductor (Shanghai) Co. Ltd (ASSH)	Amkor Technology Philippine (P1/P2), INC. (ANAP)

Wire Material	CuPd	Au	CuPd	Au	CuPdAu
Die Attach Material	2288A		2288A		3230
Molding Compound Material	CEL-9510	CEL-9200THF	CEL-9510	CEL-9200THF	G631HQ
Lead-Frame Material	C7025		C7025		C7025
Lead-Frame Paddle Size	260X260 mils	200X200 mils	260X260 mils	200X200 mils	236X236mils
See Pre and Post change summary for Lead-Frame Comparison.					

Impacts to Datasheet: None

Change Impact: None

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

Change Implementation Status: In Progress

Estimated First Ship Date: 30 June 2025 (date code: 2527)

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

Timetable Summary:

	January 2024					>	**June 2025**				
Work Week	01	02	03	04	05		23	24	25	26	27
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: January 31, 2024: Issued initial notification.
June 10, 2025: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on June 30, 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_MAAN-24WWNV902_Pre_and_Post_Change_Summary.pdf
PCN_MAAN-24WWNV902_Qual Report.pdf

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

Terms and Conditions:

If you wish to receive Microchip PCNs via email please register for our PCN email service at our **PCN home page** select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the **PCN FAQ** section.

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.

Affected Catalog Part Numbers (CPN)

ATSAM4S16BB-AN

ATSAM4S16BB-ANR

ATSAM4S8BB-AN

ATSAM4S8BB-ANR

ATSAM4SA16BA-AU

ATSAM4SA16BA-AUR

ATSAM4S2BA-AU

ATSAM4S2BA-AUR

ATSAM4N16BA-AU

ATSAM4N16BA-AUR

ATSAM4SD16BA-AU

ATSAM4SD16BA-AUR

ATSAM4SA16BB-AN

ATSAM4SA16BB-ANR

ATSAM4S2BB-AN

ATSAM4S2BB-ANR

ATSAM4S8BA-AU

ATSAM4S8BA-AUR

ATSAM4SD16BB-AN

ATSAM4SD16BB-ANR

ATSAM4S16BA-AN

ATSAM4S16BA-ANR

ATSAM4S8BA-AN

ATSAM4S8BA-ANR

ATSAM4N8BA-AU

ATSAM4N8BA-AUR

ATSAM4SD32BB-AN

ATSAM4SD32BB-ANR

ATSAM4S4BB-AN

ATSAM4S4BB-ANR

ATSAM4S16BA-AU

ATSAM4S16BA-AUR

ATSAM4SD32BA-AU

ATSAM4SD32BA-AUR

ATSAM4S4BA-AU

ATSAM4S4BA-AUR

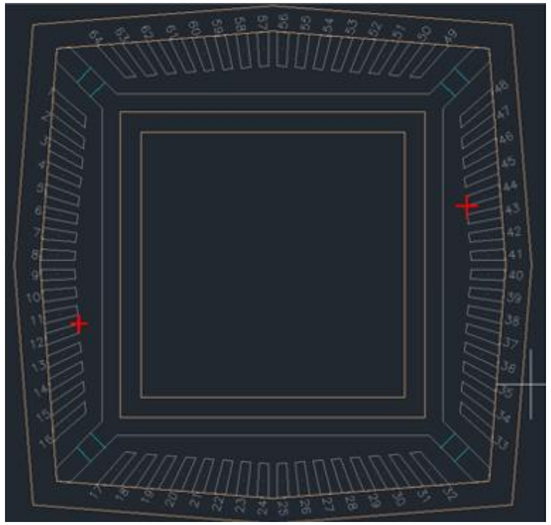
CCB 6777.001
Pre and Post Change Summary
PCN #: MAAN-24WWNV902

A Leading Provider of Smart, Connected and Secure Embedded Control Solutions

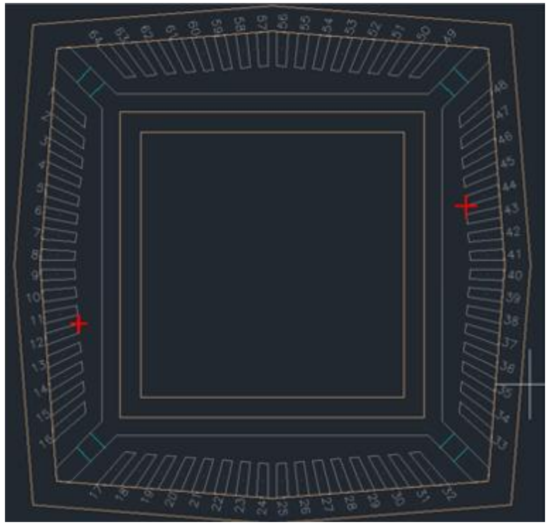
SMART | CONNECTED | SECURE

Lead Frame Comparison

ASSH

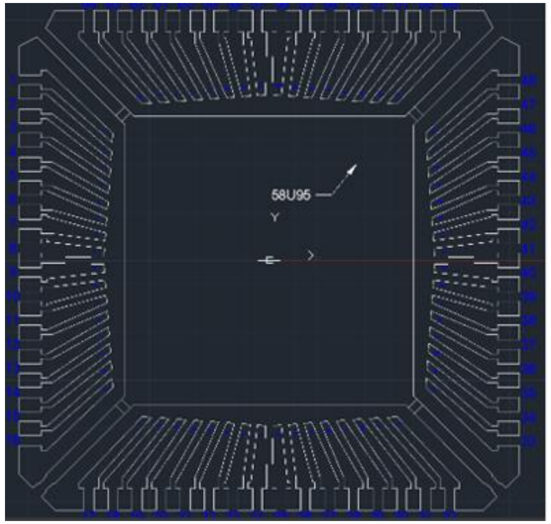


Paddle Size	260X260
Lead-Frame material	C7025



Paddle Size	200X200
Lead-Frame material	C7025

ANAP



Paddle Size	236X236
Lead-Frame material	C194ESH

Note: Not to scale

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: MAAN-24WWNV902

Date:
May 6, 2025

Qualification of ANAP as an additional assembly location for selected ATSAM4N16C, ATSAM4N8C, ATSAM4S16C, ATSAM4S16CA, ATSAM4S2C, ATSAM4S4C, ATSAM4S4CA, ATSAM4S8C, ATSAM4SA16C, ATSAM4SD16C, ATSAM4SD32C, ATSAM4S4A, ATSAM4S2A and ATSAM4N8A device families available in 100L and 48L LQFP (14x14x1.4mm and 7x7x1.4mm) packages. The qualification of ANAP as an additional assembly site for selected ATSAM4S16B, ATSAM4S8B, ATSAM4SA16B, ATSAM4S2B, ATSAM4N16B, ATSAM4SD16B, ATSAM4N8B, ATSAM4SD32B and ATSAM4S4B device families available in 64L LQFP (10x10x1.4mm) package will qualify by similarity (QBS).

Package Qualification Report

Purpose: Qualification of ANAP as an additional assembly location for selected ATSAM4N16C, ATSAM4N8C, ATSAM4S16C, ATSAM4S16CA, ATSAM4S2C, ATSAM4S4C, ATSAM4S4CA, ATSAM4S8C, ATSAM4SA16C, ATSAM4SD16C, ATSAM4SD32C, ATSAM4S4A, ATSAM4S2A and ATSAM4N8A device families available in 100L and 48L LQFP (14x14x1.4mm and 7x7x1.4mm) packages. The qualification of ANAP as an additional assembly site for selected ATSAM4S16B, ATSAM4S8B, ATSAM4SA16B, ATSAM4S2B, ATSAM4N16B, ATSAM4SD16B, ATSAM4N8B, ATSAM4SD32B and ATSAM4S4B device families available in 64L LQFP (10x10x1.4mm) package will qualify by similarity (QBS).

CCB No.: 6777 and 6777.001

Misc.	Assembly site	ANAP
	BD Number	BD-002071-01
	MP Code (MPC)	63907TH7XC01
	Part Number (CPN)	ATSAM4SD32CA-AUR
	MSL information	MSL3
	Assembly Shipping Media (T/R, Tube/Tray)	Tray
	Base Quantity Multiple (BQM)	90/Tray
	Reliability Site	MPHIL
Lead-Frame	Paddle size	256X256
	Material	C194ESH
	DAP Surface Prep	Double Ring Ag
	Treatment	Non-roughened
	Process	Stamped
	Lead-lock	Yes
	Part Number	101423138
	Lead Plating	Matte Sn
	Strip Size	80x250mm
	Strip Density	UDLF
Bond Wire	Material	CuPdAu
Die Attach	Part Number	3230
	Conductive	Yes
MC	Part Number	G631HQ
PKG	Package Type	LQFP
	Pin/Ball Count	100
	PKG width/size	14x14x1.4mm

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Package Qualification Report

Manufacturing Information

Assembly Lot No.
ANAP244500078.000
ANAP244500079.000
ANAP244500080.000

Result ☑ Pass ☐ Fail ☐ ____________________

63907 UMC 90nm in 100L LQFP 14x14x1.4mm assembled at ANAP pass Reliability test that was conducted at MPHL rel lab. This package is qualified 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 D10I_UC 85°C D10I_UC	JESD22-A113, JIP/ IPC/JEDEC J-STD-020E	231 per lot	Lot 1 0/231 Lot 2 0/231 Lot 3 0/231	Pass Pass Pass	Good Devices
	Bake 150°C, 24 hrs System: HERAEUS		231 per lot			
	Moisture Soak 192h(30°C/60%RH) System: VOTSCH VC4034		231 per lot			
	Reflow 3x Convection-Reflow 265°C max System: Mancorp CR.5000F		231 per lot	Lot 1 0/231 Lot 2 0/231 Lot 3 0/231	Pass Pass Pass	
	Electrical Test : 25°C D10I_UC 85°C D10I_UC		231 per lot	Lot 1 0/231 Lot 2 0/231 Lot 3 0/231	Pass Pass 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: HERAEUS **Electrical Test:** 25°C D10I_UC 85°C D10I_UC	JESD22-A103	45 units 3 lots	Lot 1 0/45 Lot 2 0/45 Lot 3 0/45	Pass Pass Pass	
HAST	**Stress Condition:** (Standard) 130°C, 85%RH, 96 hrs. VOLTS=3.3V System: HIRAYAMA HASTEST PC-422R8 **Electrical Test:** 25°C D10I_UC 85°C D10I_UC	JESD22-A110	77 units per lot	Lot 1 0/77 Lot 2 0/77 Lot 3 0/77		Parts had been pre-conditioned at 260°C .
UNBIASED HAST	**Stress Condition:** (Standard) 130°C, 85%RH, 96 hrs. System: HIRAYAMA HASTEST PC-422R8 **Electrical Test:** 25°C D10I_UC	JESD22-A118	77 units per lot	Lot 1 0/77 Lot 2 0/77 Lot 3 0/77	Pass Pass Pass	Parts had been pre-conditioned at 260°C

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Temp Cycle	**Stress Condition:** (Standard) - 65°C/150°C, 500 Cycles System : Votsch VTS^{2}7012 **Electrical Test:** 85°C D10I_UC	JESD22-A104	77 units per lot	Lot 1 0/77 Lot 2 0/77 Lot 3 0/77	Pass Pass Pass	Parts had been pre-conditioned at 260°C
	Wire Bond Pull WBP	Mil. Std. 883-2011	5 units, 30 bonds 1 lot	Lot 1 0/30	Pass	
Wire Bond Pull WBP , 0 Hour		Mil. Std. 883-2011	5 units, 30 bonds 1 lot	Lot 1 0/30	Pass	
Wire Bond Shear WBS, 0Hour		CDF-AEC-Q100-001	5 units, 30 bonds 1 lot	Lot 1 0/30	Pass	
Standard Pb-free Solderability	>95% lead coverage	J-STD-002E	22 units 1 lot	0/22	Pass	