



Product Change Notification / MAAN-24WWNV902

Date:

31-Jan-2024

Product Category:

32-Bit Microcontrollers

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6777.001 Initial 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_01312024.pdf](#)

[MAAN-24WWNV902_Affected_CPN_01312024.csv](#)

Notification Text:

PCN Status:Initial 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 Change Summary:

Method to Identify Change:Traceability code

Qualification Plan:Please open the attachments included with this PCN labeled as PCN_#_Qual_Plan.

Revision History:January 31, 2024: Issued initial notification.

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

Attachments:

[PCN_MAAN-24WWNV902_Pre_and_Post_Change_Summary.pdf](#)
[PCN_MAAN-24WWNV902_Qual_Plan.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.

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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



QUALIFICATION PLAN SUMMARY

PCN #: MAAN-24WWNV902

Date:

December 21, 2023

Qualification of ANAP as an additional assembly location for selected ATSAM4N16C, ATSAM4N8C, ATSAM4S16C, ATSAM4S16CA, ATSAM4S2C, ATSAM4S4C, ATSAM4S4CA, ATSAM4S8C, ATSAM4SA16C, ATSAM4SD16C, and ATSAM4SD32C device families available in 100L LQFP (14x14x1.4mm) package.

The 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).

Purpose: 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.

CCB No.: 6777.001 and 6777

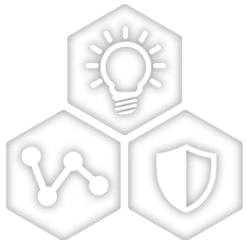
<u>Misc.</u>	Assembly site	ANAP
	BD Number	BD-002071-01
	MP Code (MPC)	63907TH7XC01
	Part Number (CPN)	ATSAM4SD32CA-AUR
	MSL information	MSL3
	Assembly Shipping Media (T/R, Tube/Tray)	Tray
	Base Quantity Multiple (BQM)	90/Tray
	Reliability Site	MPHIL
<u>Lead-Frame</u>	Paddle size	256X256
	Material	C194ESH
	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
<u>Bond Wire</u>	Material	CuPdAu
<u>Die Attach</u>	Part Number	3230
	Conductive	Yes
<u>MC</u>	Part Number	G631HQ
<u>PKG</u>	Package Type	LQFP
	Pin/Ball Count	100
	PKG width/size	14x14x1.4mm

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	ATE Test Site	REL Test Site	Special Instructions
Standard Pb-free Solderability	J-STD-002D ; Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Standard Pb-free: Matte tin/ NiPdAu finish, SAC solder, wetting temp 245°C for both SMD & through hole packages.	22	5	1	27	> 95% lead coverage	5			Standard Pb-free solderability is the requirement. SnPb solderability (backward solderability- SMD reflow soldering) is required for any plating related changes and highly recommended for other package BOM changes.
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5			30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5			30 bonds from a min. 5 devices.
Wire Sweep										Required for any reduction in wire bond thickness.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5			
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5			
Preconditioning - Required for surface mount devices	JESD22-A113. +150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020E for package type; Electrical test pre and post stress at +25°C. MSL3/260	231	15	3	738	0	15	ASSH	MPHIL	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
HAST	JESD22-A110. +130°C/85% RH for 96 hours or 110°C/85%RH for 264 hours. Electrical test pre and post stress at +25°C and hot temp (105°C).	77	5	3	246	0	10	ASSH	MPHIL	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UHAST	JESD22-A118. +130°C/85% RH for 96 hrs or +110°C/85% RH for 264 hrs. Electrical test pre and post stress at +25°C	77	5	3	246	0	10	ASSH	MPHIL	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22-A104. -65°C to +150°C for 500 cycles. Electrical test pre and post stress at hot temp (105°C); 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	ASSH	MPHIL	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

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



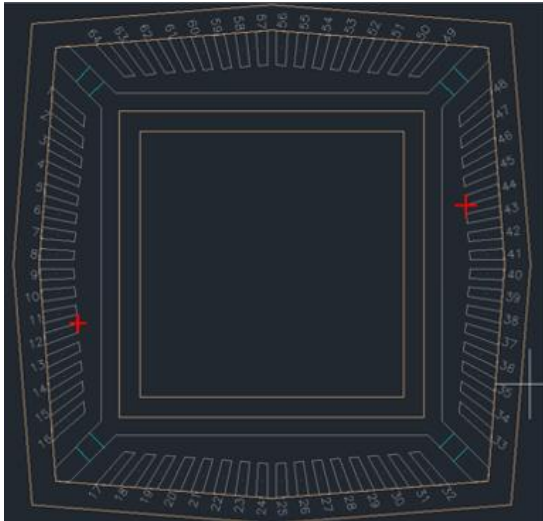
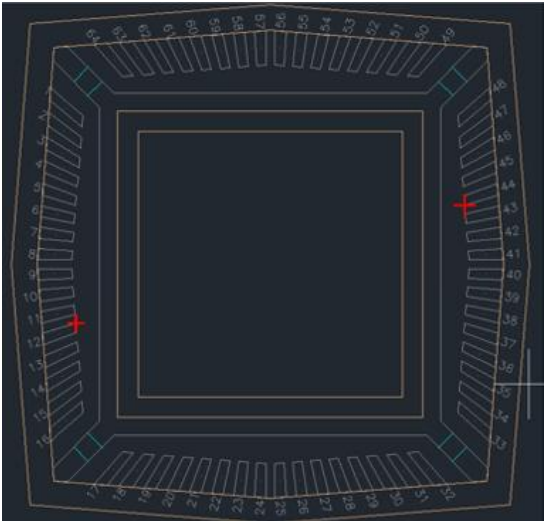
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Lead Frame Comparison

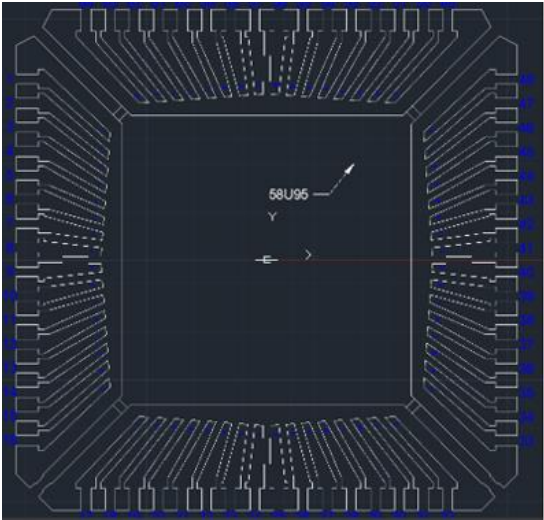
ASSH



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