



Product Change Notification / DSNO-10FNSY385

Date:

17-May-2024

Product Category:

32-Bit Microcontrollers

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6915 Initial Notice: Qualification of MTAI as a new assembly site for selected ATSAM4SA16B, ATSAM4SD32B, ATSAM4SD16B, ATSAM4S16B, ATSAM4S8B, ATSAM4N16B, ATSAM4N8B, ATSAM4S4B and ATSAM4S2B device families available in 64L VQFN (9x9x1mm) package.

Affected CPNs:

[DSNO-10FNSY385_Affected_CPN_05172024.pdf](#)

[DSNO-10FNSY385_Affected_CPN_05172024.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 MTAI as a new assembly site for selected ATSAM4SA16B, ATSAM4SD32B, ATSAM4SD16B, ATSAM4S16B, ATSAM4S8B, ATSAM4N16B, ATSAM4N8B, ATSAM4S4B and ATSAM4S2B device families available in 64L VQFN (9x9x1mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	ASE Inc. (ASE)	Microchip Technology Thailand (HQ) (MTAI)
Wire Material	PdCu	CuPdAu
Die Attach Material	EN-4900F	QMI519
Molding Compound Material	G631H	G700LTD
Lead-Frame Material	C194	A194
Lead-Frame Design	See Pre and Post change comparison	

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

Impacts to Data Sheet:None

Change Impact:None

Reason for Change:To improve manufacturability by qualifying MTAI as new assembly site.

Change Implementation Status:In Progress

Estimated Qualification Completion Date:August 2024

Note: Please be advised the qualification completion times may be extended because of unforeseen business conditions however implementation will not occur until after qualification has completed and a final PCN has been issued. The final PCN will include the qualification report and estimated first ship date. Also note that after the estimated first ship date guided in the final PCN customers may receive pre and post change parts.

Time Table Summary:

	May 2024					>	August 2024				
Workweek	1 8	1 9	2 0	2 1	2 2		31	32	33	34	35
Initial PCN Issue Date			x								
Qual Report Availability								x			
Final PCN Issue Date								x			

Method to Identify Change:Traceability code

Qualification Plan:

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

Revision History:

May 17, 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_DSNO-10FNSY385_Pre_and_Post_Change_Summary.pdf](#)

[PCN_DSNO-10FNSY385_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)

ATSAM4SA16BA-MU
ATSAM4SA16BB-MN
ATSAM4SD32BB-MN
ATSAM4SD16BB-MN
ATSAM4SD16BA-MU
ATSAM4S16BA-MU
ATSAM4S16BB-MN
ATSAM4SD32BA-MU
ATSAM4S8BA-MU
ATSAM4S8BB-MN
ATSAM4N16BA-MU
ATSAM4N8BA-MU
ATSAM4S4BB-MN
ATSAM4S2BB-MN
ATSAM4S2BA-MU
ATSAM4S4BA-MU
ATSAM4SD16BB-MNR
ATSAM4SA16BB-MNR
ATSAM4SD32BB-MNR
ATSAM4SD32BA-MUR
ATSAM4SD16BA-MUR
ATSAM4SA16BA-MUR
ATSAM4S8BB-MNR
ATSAM4S16BB-MNR
ATSAM4S16BA-MUR
ATSAM4S8BA-MUR
ATSAM4N16BA-MUR
ATSAM4N8BA-MUR
ATSAM4S4BB-MNR
ATSAM4S2BB-MNR
ATSAM4S4BA-MURN01

CCB 6915
Pre and Post Change Summary
PCN #:DSNO-10FNSY385



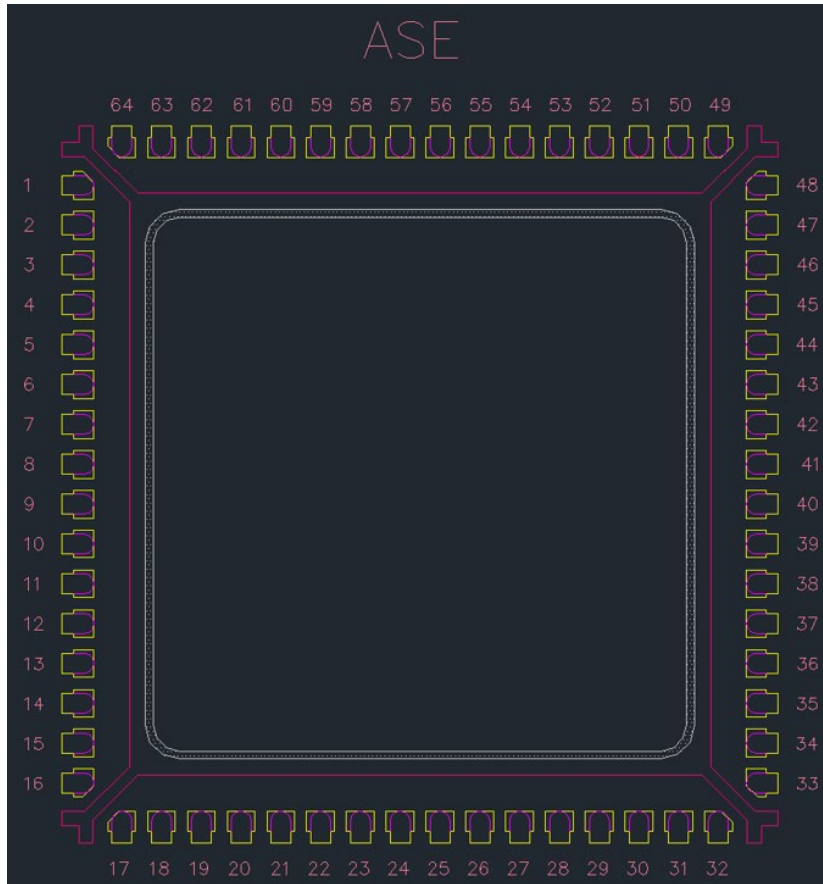
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SMART | CONNECTED | SECURE

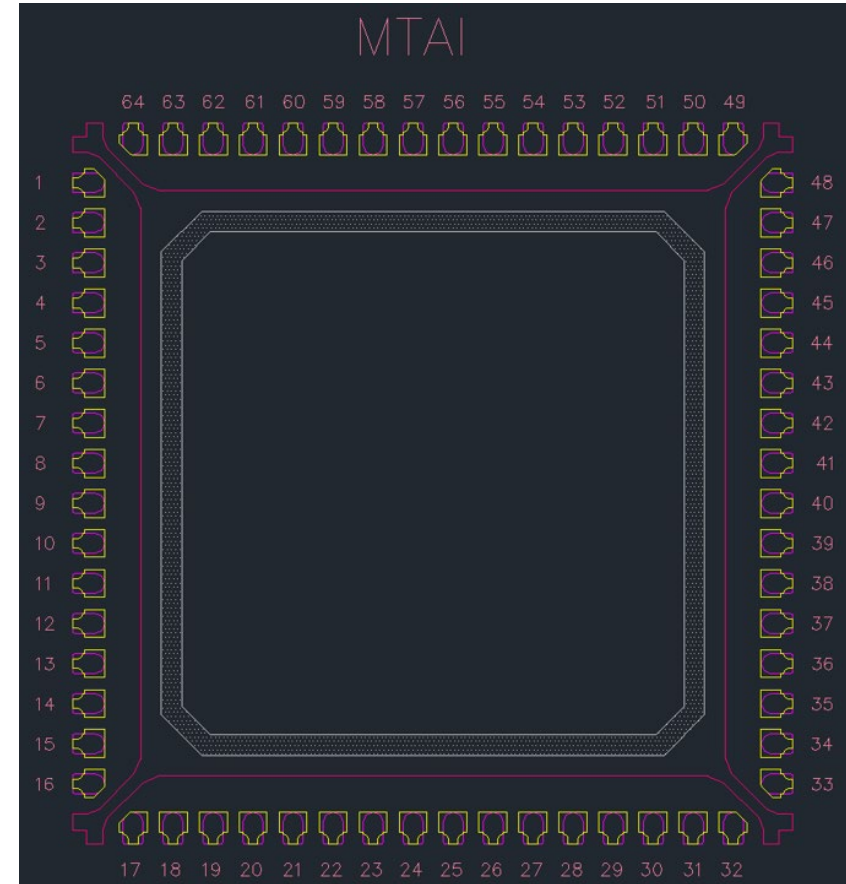
Lead Frame Comparison

Pre Change



Note: Not to scale

Post Change



Note: Not to scale



QUALIFICATION PLAN SUMMARY

PCN#: DSNO-10FNSY385

**Date:
May 14, 2024**

**Qualification of MTAI as a new assembly site for selected
ATSAM4SA16B, ATSAM4SD32B, ATSAM4SD16B,
ATSAM4S16B, ATSAM4S8B, ATSAM4N16B, ATSAM4N8B,
ATSAM4S4B and ATSAM4S2B device families available in
64L VQFN (9x9x1mm) package.**

Purpose: Qualification of MTAI as a new assembly site for selected ATSAM4SA16B, ATSAM4SD32B, ATSAM4SD16B, ATSAM4S16B, ATSAM4S8B, ATSAM4N16B, ATSAM4N8B, ATSAM4S4B and ATSAM4S2B device families available in 64L VQFN (9x9x1mm) package.

CCB No: 6915

<u>Misc.</u>	Assembly site	MTAI
	BD Number	BD-002269-01 rev.A
	MP Code (MPC)	639079THBC01
	Part Number (CPN)	ATSAM4SA16BB-MN
	MSL information	MSL3/260
	Assembly Shipping Media (T/R, Tube/Tray)	Tray
	Base Quantity Multiple (BQM)	260
	Reliability Site	MPHIL
<u>Lead-Frame</u>	Paddle size	287 x 287
	Material	A194
	DAP Surface Prep	Ag ring plated
	Treatment	Roughening
	Process	Etched
	Lead-lock	No
	Part Number	10106419
	Lead Plating	Matte Tin
	Strip Size	70 x 250 mm
	Strip Density	240 units/strip
<u>Bond Wire</u>	Material	CuPdAu
<u>Die Attach</u>	Part Number	QMI519
	Conductive	Yes
<u>MC</u>	Part Number	G700LTD
<u>PKG</u>	Package Type	VQFN
	Pin/Ball Count	64
	PKG width/size	9x9x1.0 mm

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		MPHIL	Standard Pb-free solderability is the requirement.
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.
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 and 105°C. MSL3/260C	231	15	3	738	0	15	ASE9	MPHIL	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
HAST	JESD22-A118. +130°C/85% RH for 96 hrs Electrical test pre and post stress at +25 and 105°C	77	5	3	246	0	10	ASE9	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 Electrical test pre and post stress at +25°C	77	5	3	246	0	10	ASE9	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 +25 and 105°C; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	ASE9	MPHIL	Spares should be properly identified. Use the parts which have gone through Pre-conditioning