



Product Change Notification: NTDO-13PLGV705

Date:

10-Jan-2025

Product Category:

32-Bit Microcontrollers

Notification Subject:

CCB 6917 Final Notice: Qualification of MTAI as a new assembly site for selected AT91SAM7S512, ATSAM3N00B, ATSAM3N1B, ATSAM3N0B, ATSAM3SD8B, ATSAM3S2B, ATSAM3S8B, AT91SAM7S64, ATSAM3S4B, AT91SAM7S128, AT91SAM7S256 and ATSAM3S1B device families available in 64L VQFN (9x9x1mm) package.

Affected CPNs:

[NTDO-13PLGV705_Affected_CPN_01102025.pdf](#)

[NTDO-13PLGV705_Affected_CPN_01102025.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 MTAI as a new assembly site for selected AT91SAM7S512, ATSAM3N00B, ATSAM3N1B, ATSAM3N0B, ATSAM3SD8B, ATSAM3S2B, ATSAM3S8B, AT91SAM7S64, ATSAM3S4B, AT91SAM7S128, AT91SAM7S256 and ATSAM3S1B 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/Au	CuPdAu
Die Attach Material	EN-4900F/CRM-1076DS	QMI519
Molding Compound Material	G631H/G770HC	G700LTD
Lead-Frame Material*	C194	A194
Lead-Frame Design	See Pre and Post Change Summary attachment for 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 a new assembly site.

Change Implementation Status:In Progress

Estimated First Ship Date:January 17, 2025 (date code: 2503)

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

Due to unforeseen circumstances, that are out of Microchip's control, full qualification will be made available as soon as it is approved which may be after the estimated first ship date so that Microchip can maintain continuity of supply and not disrupt customer orders.

Time Table Summary:

	May 2024					>	January 2025					February 2025			
Workweek	18	19	20	21	22		01	02	03	04	05	06	07	08	09
Initial PCN Issue Date				x											
Qual Report Availability												x			
Final PCN Issue Date								x							

Estimated Implementation Date									X						
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Method to Identify Change:Traceability code

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

Estimated Qualification Completion Date:
February 03, 2025

Note 1: This final PCN will be updated to include the Qualification report as soon as it is completed.
Note 2: Please be advised the qualification completion times may be extended because of unforeseen business conditions.

Revision History:May 20, 2024: Issued initial notification.
January 10, 2025: Issued final notification. Provided estimated first ship date to be on January 17, 2025.

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

Attachments:

PCN_NTDO-13PLGV705_Pre and Post Change_Summary.pdf
PCN_NTDO-13PLGV705_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)

ATSAM3S8BA-MUR
AT91SAM7S128D-MU-999
AT91SAM7S256D-MU-999
ATSAM3S1BB-MUR
ATSAM3S1BB-MU
AT91SAM7S512B-MU
ATSAM3N00BA-MU
ATSAM3N1BB-MU
ATSAM3N0BA-MU
ATSAM3SD8BA-MU
ATSAM3S2BA-MU
ATSAM3S8BA-MU
AT91SAM7S64C-MU
ATSAM3S4BA-MU
AT91SAM7S128D-MU
AT91SAM7S256D-MU
AT91SAM7S64C-MU-999
AT91SAM7S512B-MU-101
AT91SAM7S512B-MU-999
ATSAM3N1BB-MUR
ATSAM3N0BA-MUR
ATSAM3N00BA-MUR
ATSAM3S4BA-MUR
ATSAM3S2BA-MUR
ATSAM3SD8BA-MUR

CCB 6917
Pre and Post Change Summary
PCN #: NTDO-13PLGV705



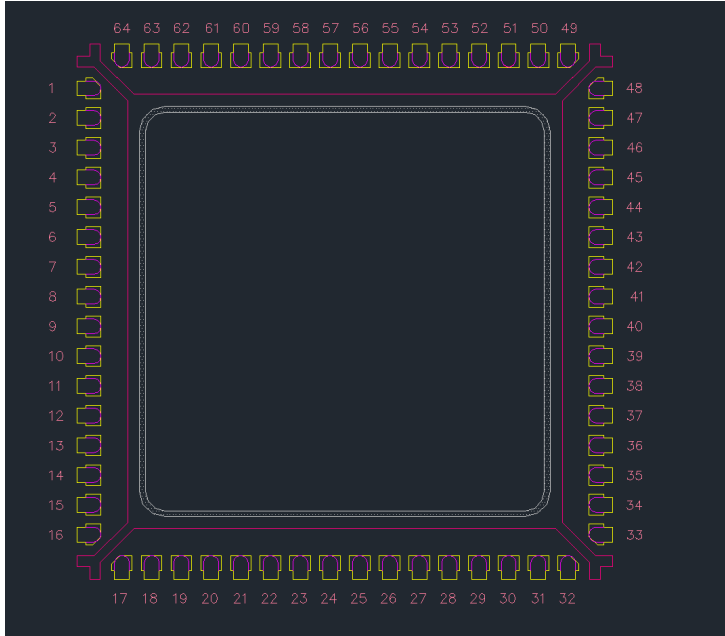
A Leading Provider of Smart, Connected and Secure Embedded Control Solutions



SMART | CONNECTED | SECURE

LEAD FRAME COMPARISON

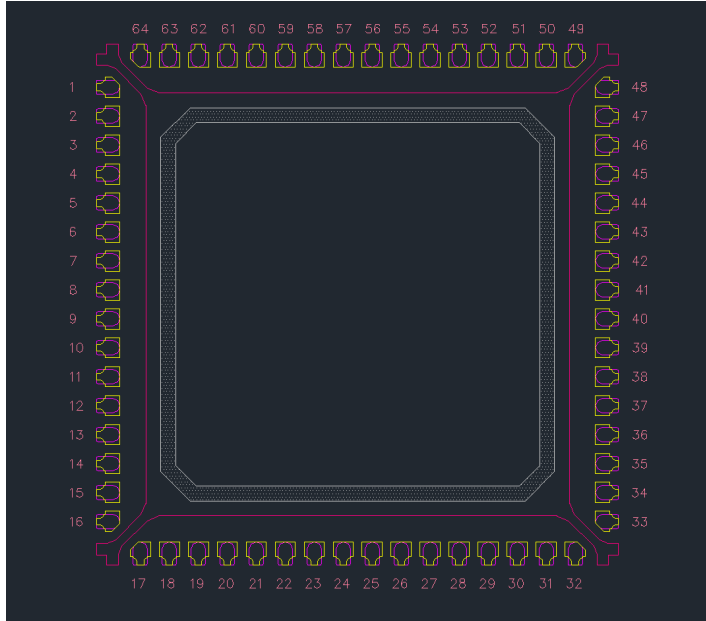
ASE



Note: Not to scale

Lead Frame Material	C194
Paddle size	287 x 287 mils
DAP Surface Prep	Ag ring plated

MTAI



Note: Not to scale

Lead Frame Material	A194
Paddle size	287 x 287 mils
DAP Surface Prep	Ag ring plated

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



QUALIFICATION PLAN SUMMARY

PCN #: NTDO-13PLGV705

**Date:
May 9, 2024**

Qualification of MTAI as a new assembly site for selected AT91SAM7S512, ATSAM3N00B, ATSAM3N1B, ATSAM3N0B, ATSAM3SD8B, ATSAM3S2B, ATSAM3S8B, AT91SAM7S64, ATSAM3S4B, AT91SAM7S128, AT91SAM7S256 and ATSAM3S1B device families available in 64L VQFN (9x9x1mm) package.

Purpose: Qualification of MTAI as a new assembly site for selected AT91SAM7S512, ATSAM3N00B, ATSAM3N1B, ATSAM3N0B, ATSAM3SD8B, ATSAM3S2B, ATSAM3S8B, AT91SAM7S64, ATSAM3S4B, AT91SAM7S128, AT91SAM7S256 and ATSAM3S1B device families available in 64L VQFN (9x9x1mm) package.

CCB No.: 6917

<u>Misc.</u>	Assembly site	MTAI
	BD Number	BD-002270 rev.01
	MP Code (MPC)	58U837THBC01
	Part Number (CPN)	ATSAM3S8BA-MU
	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	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	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	-	5	30 bonds from a min. 5 devices.
Wire Sweep								Required for any reduction in wire bond thickness.
Physical Dimmensions	Measure per JESD22 B100 and B108	10	0	3	30	-	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 85°C. MSL3/260C	231	15	3	738	0	15	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 85°C	77	5	3	246	0	10	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	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 85°C; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.