



Product Change Notification / MFOL-26MWUB160

Date:

11-Apr-2024

Product Category:

32-Bit Microcontrollers

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6778 and 6778.002 Initial Notice: Qualification of ANAP as an additional assembly site for selected AT91R40008, ATSAM3N0CA, ATSAM3N1CB, ATSAM3S1CB, ATSAM3S2CA, ATSAM3S4CA, ATSAM3U1CB, AT91SAM7S32C, ATSAM3N00A, ATSAM3N0A, ATSAM3N0AA and ATSAM3N1A device families available in 100L (14x14x1.4mm) and 48L LQFP (7x7x1.4mm) package.

Affected CPNs:

[MFOL-26MWUB160_Affected_CPN_04112024.pdf](#)

[MFOL-26MWUB160_Affected_CPN_04112024.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 AT91R40008, ATSAM3N0CA, ATSAM3N1CB, ATSAM3S1CB, ATSAM3S2CA, ATSAM3S4CA, ATSAM3U1CB, AT91SAM7S32C, ATSAM3N00A, ATSAM3N0A, ATSAM3N0AA and ATSAM3N1A device families available in 100L (14x14x1.4mm) and 48L LQFP (7x7x1.4mm) package.

Pre and Post Change Summary:*Applicable for AT91R40008, ATSAM3N0CA, ATSAM3N1CB,*

ATSAM3S1CB, ATSAM3S2CA, ATSAM3S4CA, and ATSAM3U1CB device families in 100L LQFP:

		Pre Change		Post Change	
Assembly Site		ATX Semiconductor (Shanghai) Co. Ltd (ASSH)		ATX Semiconductor (Shanghai) Co. Ltd (ASSH)	
Wire Material		Au		Au	
Die Attach Material		2288A		2288A	
Molding Compound Material		CEL-9200THF		CEL-9200THF	
Lead-Frame	Material	C7025		C7025	
	Lead-lock	No		No	
	Paddle Size	180X180	240X240	180X180	240X240
See pre and post change for comparison.					

Applicable for AT91SAM7S32C, ATSAM3N00A, ATSAM3N0A, ATSAM3N0AA and ATSAM3N1A device families in 48L LQFP:

		Pre Change		Post Change	
Assembly Site		ATX Semiconductor (Shanghai) Co. Ltd (ASSH)		ATX Semiconductor (Shanghai) Co. Ltd (ASSH)	
Wire Material		Au		Au	
Die Attach Material		2288A		2288A	

Molding Compound Material		CEL-9200THF		CEL-9200THF		G631HQ
Lead-Frame	Material	C7025		C7025		C194ESH
	Lead-lock	No		No		No
	Paddle Size	197X197	224X224	197X197	224X224	197X197 mils
		See pre and post change for comparison.				

Impacts to Data Sheet:None

Change Impact:None

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

Change Implementation Status:In Progress

Estimated Qualification Completion Date:May 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:

	January 2024					>	April 2024					May 2024			
Workweek	01	02	03	04	05		1 4	1 5	1 6	1 7	1 8	1 9	2 0	2 1	2 2
Initial PCN Issue Date	x							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:January 05, 2024: Issued initial notification.

April 11, 2024: Re-issued the initial notification to include reference CCB 6778.002. Updated the Notification subject, Description of change and Pre and Post change summary table to include AT91SAM7S32C, ATSAM3N00A, ATSAM3N0A, ATSAM3N0AA and ATSAM3N1A device families. Updated the affected CPN list to include CPNs within the scope of CCB 6778.002. Updated Pre and Post Change summary to include lead frame drawing for 48L LQFP (7x7x1.4mm) package.

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

Attachments:

- [PCN_MFOL-26MWUB160 Pre and Post_Change_Summary.pdf](#)
- [PCN_MFOL-26MWUB160_Qual_Plan.pdf](#)

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

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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.

MFOL-26MWUB160 - CCB 6778 and 6778.002 Initial Notice: Qualification of ANAP as an additional assembly site for selected AT91R40008, ATSAM3N0CA, ATSAM3N1CB, ATSAM3S1CB, ATSAM3S2CA, ATSAM3S4CA, ATSAM3U1CB, AT91SAM7S32C, ATSAM3N00A, ATSAM3N0A, ATSAM3N0AA and ATSAM3N1A device families available in 100L (14x14x1.4mm) and 48L LQFP (7x7x1.4mm) package.

Affected Catalog Part Numbers (CPN)

ATSAM3N1CB-AU
ATSAM3N1CB-AUR
ATSAM3N0CA-AU
ATSAM3N0CA-AUR
AT91R40008-66AU
AT91R40008-66AU-999
ATSAM3S2CA-AU
ATSAM3S2CA-AUR
ATSAM3S4CA-AU
ATSAM3S4CA-AUR
ATSAM3U1CB-AU
ATSAM3S1CB-AU
ATSAM3S1CB-AUR
ATSAM3N1AB-AU
ATSAM3N1AB-AUR
AT91SAM7S32C-AU
ATSAM3N00AA-AU
ATSAM3N00AA-AUR
ATSAM3N0AA-AU
ATSAM3N0AA-AUR



MICROCHIP
QUALIFICATION PLAN SUMMARY

PCN #: MFOL-26MWUB160

Date:
December 21, 2023

Qualification of ANAP as an additional assembly site for selected AT91R40008, ATSAM3N0CA, ATSAM3N1CB, ATSAM3S1CB, ATSAM3S2CA, ATSAM3S4CA, ATSAM3U1CB, AT91SAM7S32C, ATSAM3N00A, ATSAM3N0A, ATSAM3N0AA and ATSAM3N1A device families available in 100L (14x14x1.4mm) and 48L LQFP (7x7x1.4mm) package.

Purpose: Qualification of ANAP as an additional assembly site for selected AT91R40008, ATSAM3N0CA, ATSAM3N1CB, ATSAM3S1CB, ATSAM3S2CA, ATSAM3S4CA, ATSAM3U1CB, AT91SAM7S32C, ATSAM3N00A, ATSAM3N0A, ATSAM3N0AA and ATSAM3N1A device families available in 100L (14x14x1.4mm) and 48L LQFP (7x7x1.4mm) package.

CCB No. 6778 and 6778.002

Misc.	Assembly site	ANAP
	BD Number	BD-002072-01
	MP Code (MPC)	58A907H7XC03
	Part Number (CPN)	AT91R40008-66AU
	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
Bond Wire	Lead-lock	Yes
	Part Number	101423138
	Lead Plating	Matte Sn
	Strip Size	80x250mm
	Strip Density	UDLF
Die Attach	Material	Au
	Part Number	3230
MC	Conductive	Yes
	Part Number	G631HQ
PKG	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 Instruction
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.
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	ASE9	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 (85°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 or +110°C/85%	77	5	3	246	0	10	ASE9	MPHIL	Spares should be properly identified.

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 Instruction
	RH for 264 hrs. Electrical test pre and post stress at +25°C									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 (85°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.

**CCB 6778 and 6778.002
Pre and Post Change Summary
PCN# MFOL-26MWUB160**



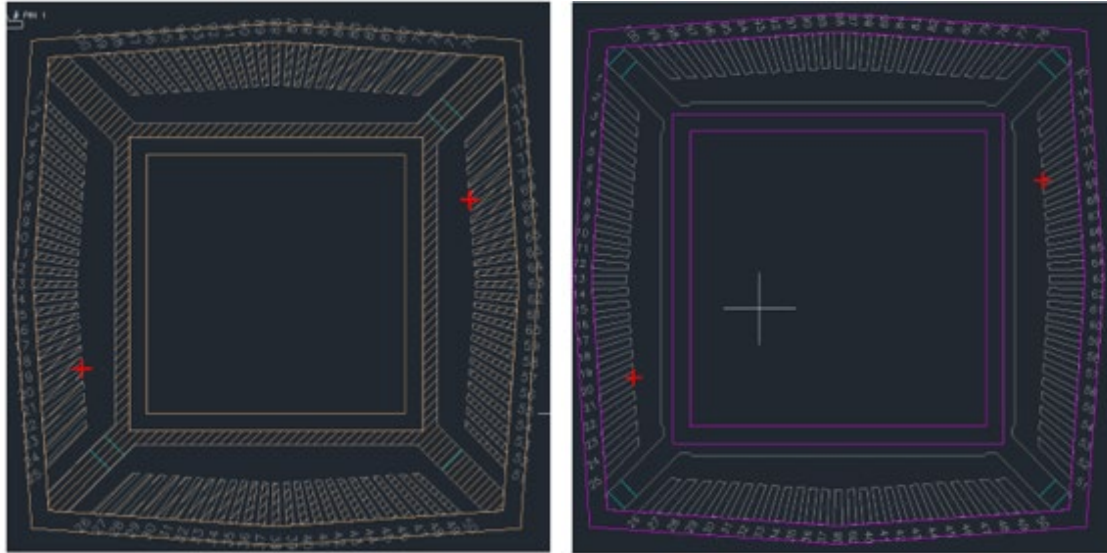
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SMART | CONNECTED | SECURE

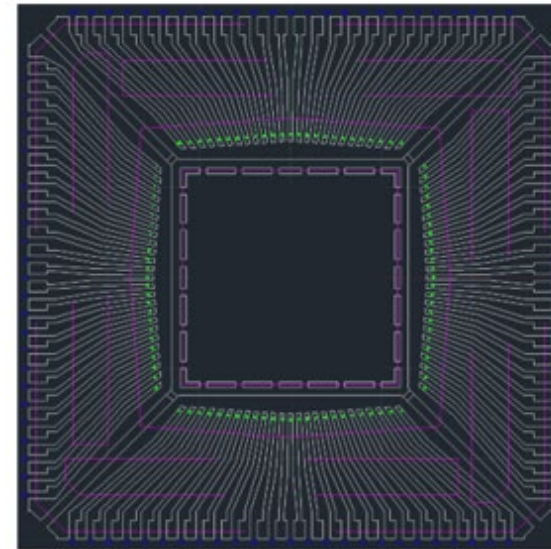
Lead-Frame Comparison – 100L LQFP (14x14x1.4mm)

ASSH



Leadframe Material	C7025	
Leadframe Leadlock	No	
Leadframe Paddle Size	180X180 mils	240X240 mils

ANAP

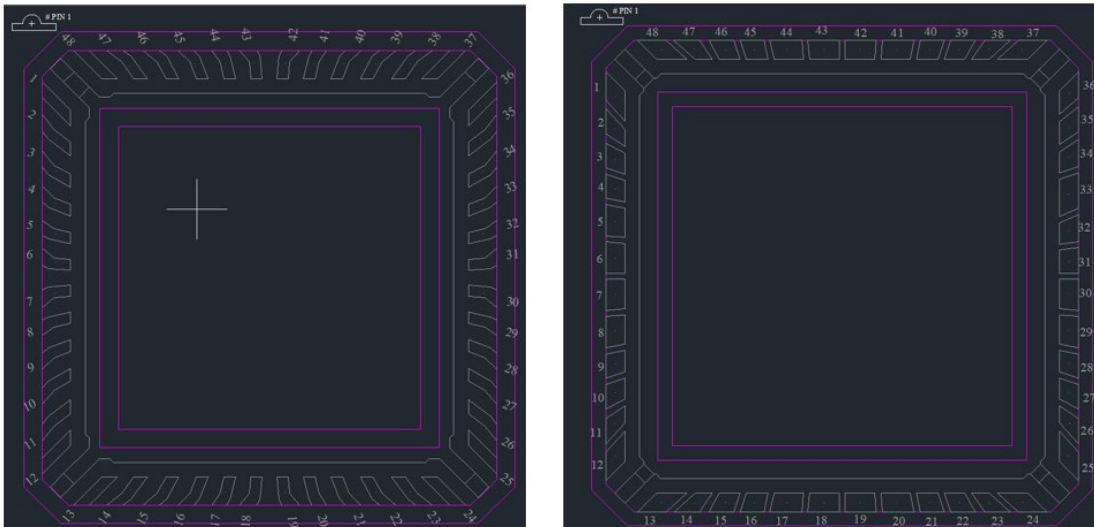


Leadframe Material	C194ESH	
Leadframe Leadlock	Yes	
Leadframe Paddle Size	256X256 mils	

Note: Not to scale

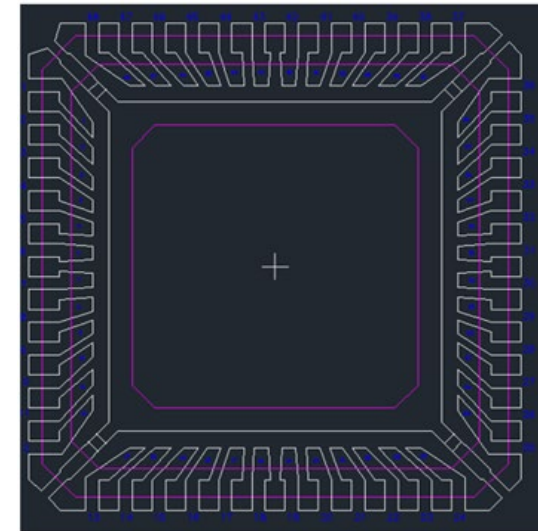
Lead-Frame Comparison – 48L LQFP (7x7x1.4mm)

ASSH



Lead-Frame Material	C7025	
Lead-Frame Leadlock	No	
Leadframe Paddle Size	197X197 mils	224X224 mils

ANAP



Lead-Frame Material	C194ESH	
Lead-Frame Leadlock	No	
Leadframe Paddle Size	197X197 mils	

Note: Not to scale