



Product Change Notification / MFOL-02RMEZ001

Date:

07-Nov-2022

Product Category:

Current And Power Measurement ICs

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5351 Initial Notice: Qualification of MMT as an additional assembly site for PAC1710-1-AIA-TR, PAC1720-1-AIA-TR, and PAC1921-1-AIA-TR catalog part numbers (CPN) available in 10L VDFN (3x3x0.9mm) package.

Affected CPNs:

[MFOL-02RMEZ001_Affected_CPN_11072022.pdf](#)

[MFOL-02RMEZ001_Affected_CPN_11072022.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 MMT as an additional assembly site for PAC1710-1-AIA-TR, PAC1720-1-AIA-TR, and PAC1921-1-AIA-TR catalog part numbers (CPN) available in 10L VDFN (3x3x0.9mm) package.

Pre and Post Change Summary:

		Pre Change		Post Change		
Assembly Site		HANA Microelectronics -China (HANC)	Amkor Technology Philippines (P3/P4), INC. (ATP7)	HANA Microelectronics -China (HANC)	Amkor Technology Philippines (P3/P4), INC. (ATP7)	Microchip Technology Thailand (Branch) (MMT)
Wire Material		Au	Au	Au	Au	Au
Die Attach Material		2200D	AMK06	2200D	AMK06	8600
Molding Compound Material		CEL9220HF13H	G700Y	CEL9220HF13H	G700Y	G700LTD
Lead-F rame	Material	C194	C194	C194	C194	A194
	Lead-loc k	No	No	No	No	Yes
	Paddle Size	70 x 98 mils	71 x 98 mils	70 x 98 mils	71 x 98 mils	71 x 98 mils
DAP Surface Prep		NiPdAu	NiPdAu	NiPdAu	NiPdAu	NiPdAu

Note: * C194, A194 or CDA194 Lead frame material are the same, it is just a MCHP internal labelling difference below the pre and post summary table.

Impacts to Data Sheet:Yes. Package Outline Drawing (POD).

Units: mm		HANC			ATP7			MMT		
		Min	Nom	Max	Min	Nom	Max	Min	Nom	Max
Number of Pins	N	10			10			10		
Pitch	e	0.50 BSC			0.50 BSC			0.50 BSC		
Overall Height	A	0.85	0.9	0.95	0.08	0.85	0.9	0.8	0.9	1
Stand off	A1	-	-	-	0	0.02	0.05	0	0.02	0.05
Contact Thickness	A3	0.2	0.203	0.211	0.20 REF			0.20 REF		
Overall Length	D	3.00 BSC			3.00 BSC			3.00 BSC		
Exposed Pad Length	D2	2.2	2.45	2.7	2.2	2.3	2.4	2.2	2.3	2.4
Overall Width	E	3.00 BSC			3.00 BSC			3.00 BSC		
Exposed pad width	E2	1.4	1.575	1.75	1.5	1.6	1.7	1.5	1.6	1.7
Contact Width	b	0.18	0.23	0.3	0.18	0.25	0.3	0.2	0.25	0.3
Contact Length	L	0.35	0.4	0.45	0.35	0.4	0.45	0.35	0.4	0.45

Terminate-to-Exposed pad	K				0.2			0.2		
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Change Impact:None

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

Change Implementation Status:In Progress

Estimated Qualification Completion Date:December 2022

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:

	November 2022					December 2022			
Workweek	4 5	4 6	4 7	4 8	4 9	5 0	5 1	5 2	5 3
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:November 07, 2022: 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_MFOL-02RMEZ001_Pre and Post change_summary.pdf](#)
[PCN_MFOL-02RMEZ001_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.

Affected Catalog Part Numbers (CPN)

PAC1710-1-AIA-TR

PAC1720-1-AIA-TR

PAC1921-1-AIA-TR

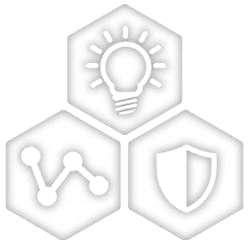
CCB 5351

Pre and Post Change Summary

PCN #: MFOL-02RMEZ001

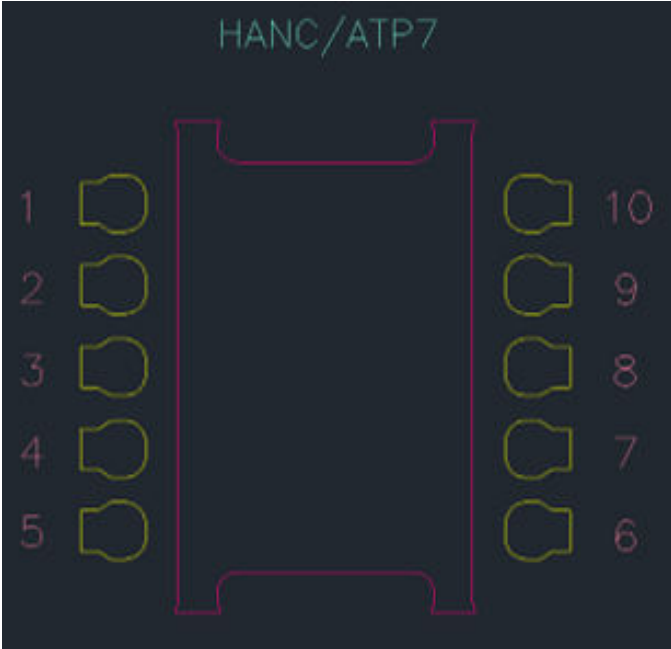
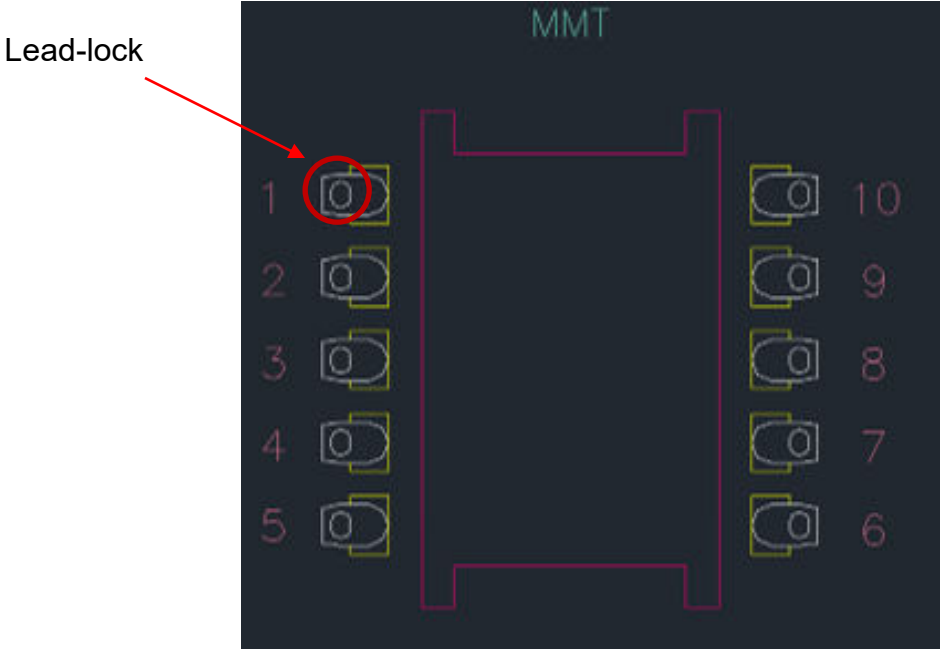


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LEADFRAME COMPARISON

HANC / ATP7	MMT								
									
<table><tr><td>Lead-lock</td><td>No</td></tr><tr><td>Lead frame Material</td><td>C194</td></tr></table>	Lead-lock	No	Lead frame Material	C194	<table><tr><td>Lead-lock</td><td>Yes</td></tr><tr><td>Lead frame Material</td><td>A194</td></tr></table>	Lead-lock	Yes	Lead frame Material	A194
Lead-lock	No								
Lead frame Material	C194								
Lead-lock	Yes								
Lead frame Material	A194								

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

Note: Mold compound materials fills the leadlock hole, which provides improved protection against moisture penetration along the edge of the leads (pins) of the package.



MICROCHIP
QUALIFICATION PLAN SUMMARY

PCN ID#: MFOL-02RMEZ001

Date:
October 27, 2022

**Qualification of MMT as an additional assembly site for
PAC1710-1-AIA-TR, PAC1720-1-AIA-TR, and PAC1921-1-AIA-
TR catalog part numbers (CPN) available in 10L VDFN
(3x3x0.9mm) package.**

Purpose: _____ Qualification of MMT as an additional assembly site for PAC1710-1-AIA-TR, PAC1720-1-AIA-TR, and PAC1921-1-AIA-TR catalog part numbers (CPN) available in 10L VDFN (3x3x0.9mm) package.

CCB: _____ 5351

MP Code: _____ VA202Y9QXAC0

Part No.: _____ PAC1921-1-AIA-TR

BD No.: _____ BD-000914 rev. 01

Package:

Type: _____ 10L VDFN

Width or Size: _____ 3 x 3 x 0.9 mm

Leadframe:

Paddle Size: _____ 71 x 98 mils

Paddle Plating: _____ NiPdAu

Process: _____ ETCHED

Treatment: _____ PPF

Lead Lock: _____ YES

Material: _____ A194

Part Number: _____ 10101004

Wire:

Material: _____ Au

Die Attach Epoxy:

Part Number _____ 8600

Conductive _____ Yes

Mold Compound:

Part Number: _____ G700LTD

Lead Finish: _____ 100% NiPdAu

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	-	MTAI	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	-	MTAI	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5	-	MTAI	30 bonds from a min. 5 devices.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5	-	MTAI	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	-	MTAI	

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
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. MSL-1/260°C	231	15	3	738	0	15	MT AI	MTAI	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 Electrical test pre and post stress at +25°C and hot temp.	77	5	3	246	0	10	MTA I	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

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
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	MT AI	MTAI	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; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	MTA I	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.