



Product Change Notification / CENO-04NLGN370

Date:

11-May-2022

Product Category:

Crypto Authentication

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5123 Initial Notice: Qualification of MTAI as an additional assembly site for selected ATECC108A, ATECC508A, ATSHA204A, ATECC608A, ATECC608B and ECC608-TFLXWPC device families available in 8L SOIC (3.90mm) package.

Affected CPNs:

[CENO-04NLGN370_Affected_CPN_05112022.pdf](#)

[CENO-04NLGN370_Affected_CPN_05112022.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 an additional assembly site for selected ATECC108A, ATECC508A, ATSHA204A, ATECC608A, ATECC608B and ECC608-TFLXWPC device families available in 8L SOIC (3.90mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change	
Assembly Site	ASE Advanced Semiconductor (Shanghai) Co., Ltd (ASSH)	ASE Advanced Semiconductor (Shanghai) Co., Ltd (ASSH)	Microchip Technology Thailand (MTAI)
Wire Material	PdCu	PdCu	CuPdAu
Die Attach Material	EN-4900G	EN-4900G	8390A
Molding Compound Material	G700LY	G700LY	G600V
Lead-Frame Material	C194	C194	CDA194
Lead-Frame Paddle Size	70 x 70 / 90 x 90	70 x 70 / 90 x 90	90 x 90
DAP Surface Prep	PPF	PPF	Bare Cu
Lead Plating	NiPdAu	NiPdAu	Matte tin

Impacts to Data Sheet:None

Change Impact:None

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

Change Implementation Status:In Progress

Estimated Qualification Completion Date:August 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:

	May 2022					>	August 2022				
Workweek	1 9	2 0	2 1	2 2	2 3		32	33	34	35	36
Initial PCN Issue Date		x									
Qual Report Availability								x			

Final PCN Issue 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.

Revision History:May 11, 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_CENO-04NLGN370_Pre and Post Change_Summary.pdf](#)
- [PCN_CENO-04NLGN370_Qualification 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)

ATSHA204A-SSHMD-B
ATSHA204A-SSHDA-B
ATSHA204A-SSH1S-B
ATSHA204A-SSHDA-T
ATSHA204A-SSHCZ-T
ATSHA204A-TCSMS
ATECC608B-SSHMD-B
ATECC608A-TNGACTS-B
ATECC608B-TNGACTS-B
ATECC608B-SSHCZ-B
ATECC608B-SSHDA-B
ATECC608A-TNGLORAS-B
ATECC608A-SSHMD-B
ATECC608B-TNGLORAS-B
ATECC608B-TNGTLSS-B
ATECC608B-TFLXTLSS-PROTO
ATECC608A-TNGTLSS-B
ATECC608A-TFLXTLSS-PROTO
ATECC108A-SSHDA-B
ATECC108A-SSHCZ-B
ATECC508A-SSHDA-B
ATECC508A-SSHCZ-B
ATECC508A-SSHHL-B
ATECC508A-SSHRA-B
ATECC508A-SSHMT-B
ATECC608A-SSHDA-B
ATECC608A-SSHCZ-B
ATECC608A-SSHHL-B
ATECC508A-SSH1P-T
ECC608-TFLXWPCS-PROTO
ATECC608B-SSVDA-B
ATECC608B-SSVHL-T
ATECC608B-SSVDA-T
ATECC608B-SSHHL-T
ATECC108A-SSHDA-T
ATECC108A-SSHCZ-T
ATECC508A-SSHDA-T
ATECC508A-SSHCZ-T
ATECC508A-SSHHL-T
ATECC508A-SSHRA-T
ATECC508A-SSHMT-T
ATECC508A-SSHZC-T
ATECC508A-SSHZJ-T
ATECC508A-SSHAW-T
ATECC508A-SSHWA-T
ATECC508A-SSHC9-T

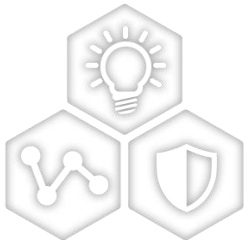
CENO-04NLGN370 - CCB 5123 Initial Notice: Qualification of MTAI as an additional assembly site for selected ATECC108A, ATECC508A, ATSHA204A, ATECC608A, ATECC608B and ECC608-TFLXWPC device families available in 8L SOIC (3.90mm) package.

ATECC608A-SSHDA-T
ATECC608A-SSHCZ-T
ATECC608A-SSHHL-T
ATECC608A-SSH4P-T
ATECC608A-TNGACTS-C
ATECC608B-TNGACTS-C
ATECC608A-TNGLORAS-C
ATECC608B-TNGLORAS-C
ATECC608B-TNGTLSS-C
ATECC608A-TNGTLSS-C
ECC608-TFLXWPCS
ATECC608A-TNGACTS-G
ATECC608B-TNGACTS-G
ATECC608A-TNGLORAS-G
ATECC608B-TNGLORAS-G
ATECC608B-TNGTLSS-G
ATECC608A-TNGTLSS-G
ATECC508A-SSH1F-T
ATECC508A-SSH1M-T
ATECC608A-SSH4N-T
ATECC508A-SSHC6-T
ATECC508A-SSH1L-T
ATECC608A-SSH2P-T
ATECC608A-SSH3M-T
ATECC608B-SSH3S-T
ATECC608B-SSHA5-T
ATECC608B-SSHA6-T
ATECC608B-SSHCZ-T
ATECC608B-SSHDA-T
ATECC608A-SSHGA-T
ATECC608B-SSHKA-T
ATECC608A-SSHXA-T
ATECC608B-TCSMS
ATECC608B-TFLXTLSS
ATECC608A-TCSMS
ATECC608A-TFLXTLSS

CCB 5123
Pre and Post Change Summary
PCN #: CENO-04NLGN370



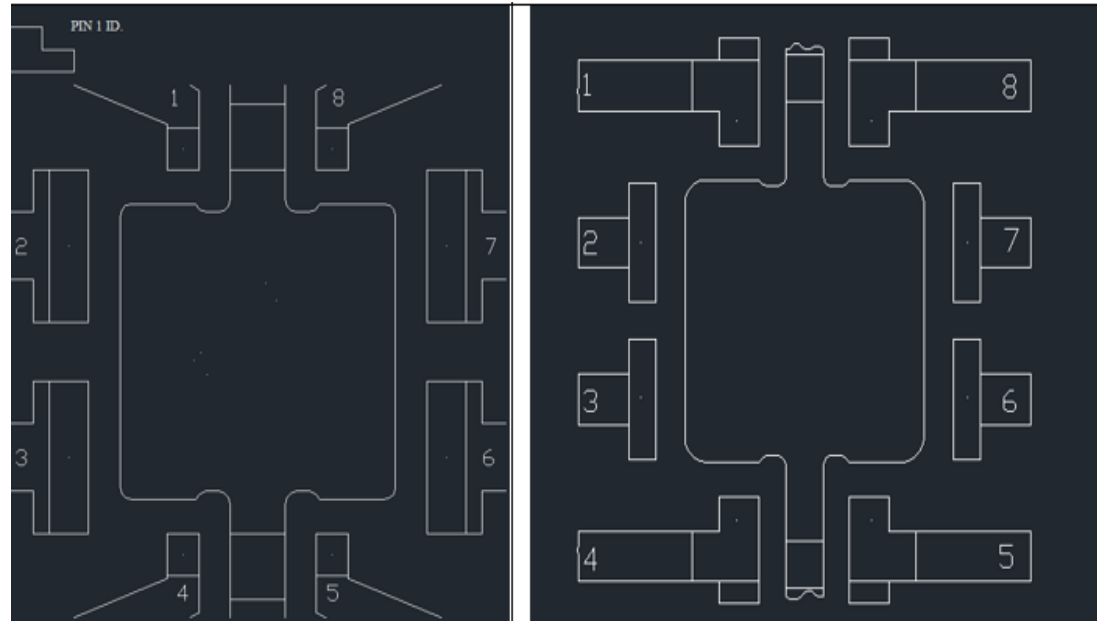
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SMART | CONNECTED | SECURE

LEAD FRAME COMPARISON

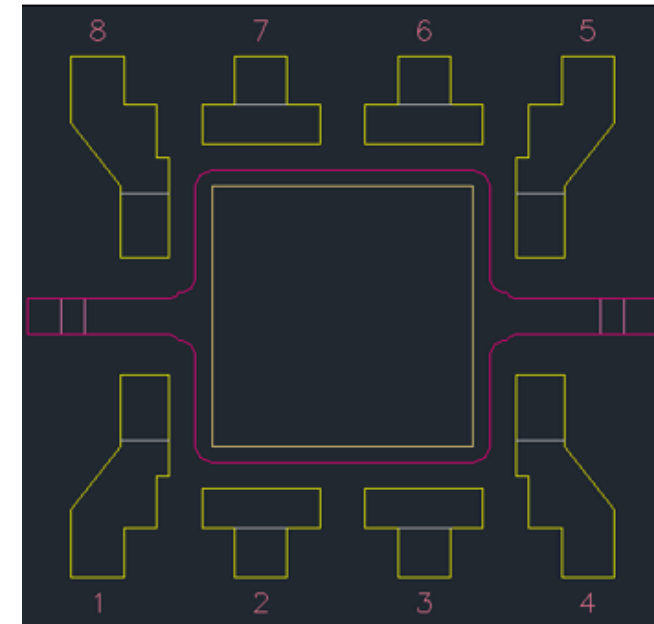
ASSH



Note: Not to scale

Lead frame DAP surface prep	PPF
Lead Plating	NiPdAu
Lead-Frame Paddle Size	70 x 70 / 90 x 90

MTAI



Note: Not to scale

Lead frame DAP surface prep	Bare Cu
Lead Plating	Matte tin
Lead-Frame Paddle Size	90 x 90



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QUALIFICATION PLAN

PCN #: CENO-04NLGN370

April 20, 2022

Qualification of MTAI as an additional assembly site for selected ATECC108A, ATECC508A, ATSHA204A, ATECC608A, ATECC608B and ECC608-TFLXWPC device families available in 8L SOIC (3.90mm) package.

Purpose: Qualification of MTAI as an additional assembly site for selected ATECC108A, ATECC508A, ATSHA204A, ATECC608A, ATECC608B and ECC608-TFLXWPC device families available in 8L SOIC (3.90mm) package.

CCB#: 5123

Misc.	Assembly site	MTAI
	BD Number	BD-000495-02
	MP Code (MPC)	58962TC2XTXA
	Part Number (CPN)	ATECC608A-SSHXA-T
	MSL information	1
	Assembly Shipping Media (T/R, Tube/Tray)	Tube / T&R
	Base Quantity Multiple (BQM)	100 / 4000
	Reliability Site	MTAI
Lead-Frame	Paddle size	90 x 90 mils
	Material	CDA194
	DAP Surface Prep	Bare Cu
	Treatment	BOT
	Process	Stamped
	Lead-lock	No
	Part Number	10100812
	Lead Plating	Matte tin
	Strip Size	70 x 250 mm
	Strip Density	X140
Bond Wire	Material	CuPdAu
Die Attach	Part Number	8390A
	Conductive	Yes
MC	Part Number	G600V
PKG	PKG Type	SOIC
	Pin/Ball Count	8
	PKG width/size	150 mils

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	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.
Backward Solderability	J-STD-002D ;Perform 8 hours steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Backward: Matte tin/ NiPdAu finish, SnPb solder, wetting temp 215°C for SMD.	22	5	1	27	> 95% lead coverage	5	
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	Cp or Cpk ≥ 1.67	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	+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	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
HAST	+130°C/85% RH for 96 hours or 110°C/85%RH for 264 hours. Electrical test pre and post stress at +25°C, 85C and 100C. Max temp testing at 100C.	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UHAST	+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	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	-65°C to +150°C for 500 cycles. Electrical test pre and post stress at 85C and 100C; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress. Max temp testing at 100C.	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.