Product Change Notification / CAAN-20EDKO108

Date:

25-Jan-2023

Product Category:

Memory

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6045 Initial Notice: Qualification of MMT as a new assembly site for selected AT28C010x and AT28LV010 device families available in 32L PLCC (11.5x14x3.37mm) package.

Affected CPNs:

CAAN-20EDKO108_Affected_CPN_01252023.pdf
CAAN-20EDKO108_Affected_CPN_01252023.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 a new assembly site for selected AT28C010x and AT28LV010 device families available in 32L PLCC (11.5x14x3.37mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change

Assembly Site	AIC Semiconductor Sdn Bhd (AIC)	Microchip Technology Thailand (Branch) (MMT)
Wire Material	Au	Au
Die Attach Material	8290	3280
Molding Compound Material	G600T	G600V
Lead-Frame Material	A151	A194
Lead-Frame Paddle Size	391x275 mils	401x275 mils
DAP Surface Prep	Ag Spot Plated	Ag Ring Plated
Tube Dimension	With minor dimensional changes See Pre and Post Change Summary	
Tube Illustration and Stopper	See Pre and Post Change Summary	
Pin 1 orientation	See Pre and Post Change Summary	

Impacts to Data Sheet: None

Change Impact None

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

Change Implementation Status: In Progress

Estimated Qualification Completion Date: April 2023

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 2023					**>**	**April 2023**					
Workweek	1	2	3	4	5		13	14	15	16	17	18
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:
January 25, 2023: 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_CAAN-20EDKO108_Qualification Plan.pdf
PCN_CAAN-20EDKO108_Pre and Post Change_Summary.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.

QUALIFICATION PLAN SUMMARY

PCN#: CAAN-20EDKO108

Date:
December 09, 2022

Qualification of MMT as a new assembly site for selected AT28C010x and AT28LV010 device families available in 32L PLCC (11.5x14x3.37mm) package.

Purpose: Qualification of MMT as a new assembly site for selected AT28C010x and AT28LV010 device families available in 32L PLCC (11.5x14x3.37mm) package.

CCB#: 6045

Misc.	**Assembly site**	MMT
	BD Number	BD-001164 rev 01
	MP Code (MPC)	195067P3XC01
	Part Number (CPN)	AT28C010-12JU
	MSL information	MSL-2/245C
Lead-Frame	**Paddle size**	401x275 mils
	Material	A194
	Surface	Ag Ring Plated
	Treatment	BOT
	Process	Etched
	Lead-lock	No
	Part Number	10103215
	Lead Plating	Matte Tin
	Strip Size	70x222.22mm
	Strip Density	24 units/strip
Bond Wire	**Material**	Au
Die Attach	**Part Number**	3280
	Conductive	Yes
MC	**Part Number**	G600V
PKG	**PKG Type**	PLCC
	Pin/Ball Count	32
	PKG width/size	11.5x14x3.37mm

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	Test Site	Special Instructions
Standard Pb-free Solderability	J-STD-002 ; 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	3	15	0 fails after TC	5	MMT/MTAI	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	3	15	0	5	MMT/MTAI	30 bonds from a minimum of 5 devices.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MMT/ MPHL	
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-2@245°C	231	15	3	738	0	15	MPHL	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
Unbiased HAST	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at +25°C.	77	5	3	246	0	10	MPHL	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	Test Site	Special Instructions
Temp Cycle	-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	MPHL	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

Affected Catalog Part Numbers (CPN)

AT28C010-12JU
AT28C010-12JU-076
AT28C010E-12JU
AT28C010-15JU
AT28C010E-15JU
AT28LV010-20JU
AT28LV010-20JU-319
AT28C010E-12JU-341
AT28LV010-20JU-051
AT28C010-12JU-235
AT28C010E-12JU-235
AT28C010-15JU-235
AT28C010E-15JU-235
AT28LV010-20JU-235
AT28C010-12JU-T
AT28C010E-12JU-T
AT28C010-15JU-T
AT28C010E-15JU-T
AT28LV010-20JU-T
AT28LV010-20JU-630

CCB 6045
Pre and Post Change Summary
PCN #: CAAN-20EDKO108

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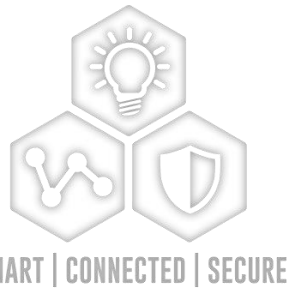
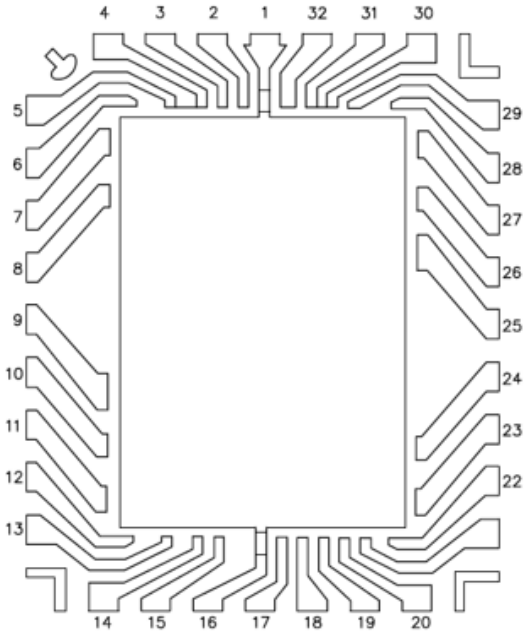


LEAD FRAME COMPARISON

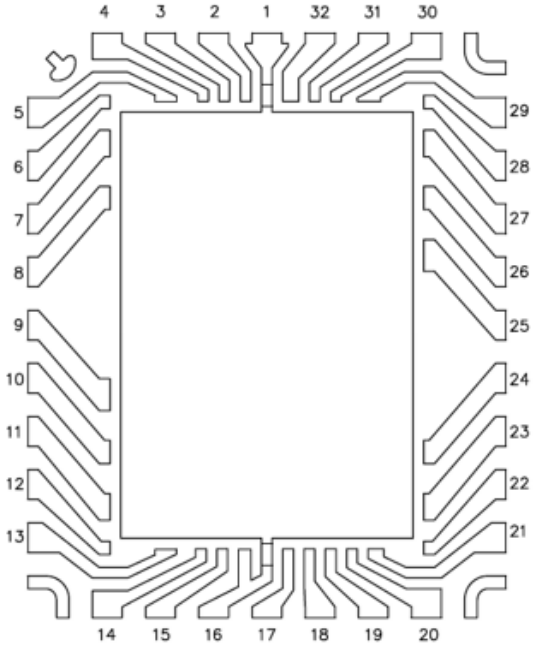
Pre change



Note: Not to scale

Lead frame DAP surface prep	Ag Spot Plated
Lead Plating	Matte Tin
Lead-Frame Paddle Size	391x275 mils

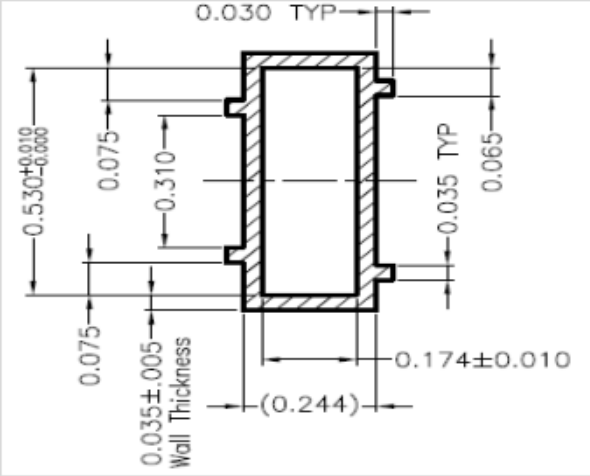
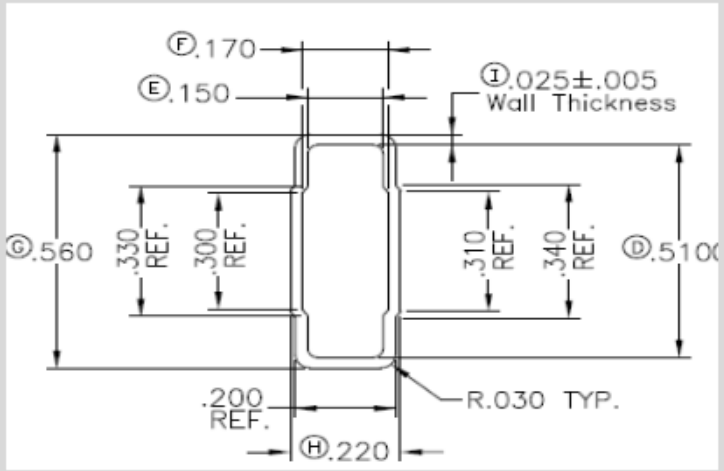
Post change



Note: Not to scale

Lead frame DAP surface prep	Ag Ring Plated
Lead Plating	Matte tin
Lead-Frame Paddle Size	401x275 mils

TUBE DIMENSION

Pre change	Post change
Tube Dimension	
Length: 20.40+/-0.10 inch Width: 0.600+0.015/-0.005 inch Tube Opening Length (A): 0.174 + 0.010 inch Tube Opening Width (B): 0.530+0.010/-0.000 inch Wall thickness (T): 0.035 + 0.005 **Tube Opening:** 	Length: 21.70 ± 0.045 inch Width: 0.560 ± 0.015 inch Tube Opening Length (A): 0.170 ± 0.010 inch Tube Opening Width (B): 0.510 ± 0.010 inch Wall thickness (T): 0.025 ± 0.005 inch **Tube Opening:** 

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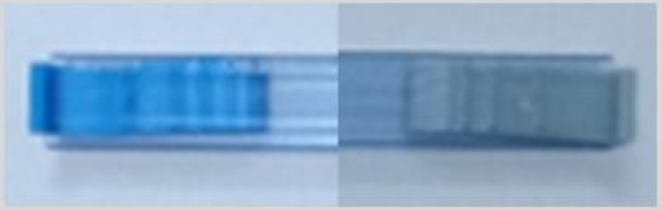
TUBE ILLUSTRATION AND STOPPER

Pre change	Post change
Tube Photo and Illustration	
 	 
Tube Stopper	
 Blue colored stopper only on both ends	 Blue and gray colored stopper

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PIN 1 ORIENTATION