Product Change Notification: ALAN-10KOZF594

Date:

13-Nov-2024

Product Category:

Analog Temperature Sensors, Analog to Digital Converters, Digital Potentiometers, Digital to Analog Converters

Notification Subject:

CCB 7276 Initial Notice: Qualification palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP3421, MCP4725, MCP4726, MCP4706, MCP4716, MCP9510, MCP47DA1, MCP4023, MCP4022, MCP4013, MCP4012, and MCP3425 device families available in 6L SOT-23 package.

Affected CPNs:

ALAN-10KOZF594_Affected_CPN_11132024.pdf
ALAN-10KOZF594_Affected_CPN_11132024.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 palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP3421, MCP4725, MCP4726, MCP4706, MCP4716, MCP9510, MCP47DA1, MCP4023, MCP4022, MCP4013, MCP4012, and MCP3425 device families available in 6L SOT-23 package.

Pre and Post Change Summary:

	Pre Change	Post Change

Assembly Site	Microchip Technology Thailand (HQ) (MTAI)	Microchip Technology Thailand (HQ) (MTAI)
Wire Material	Au	CuPdAu
Die Attach Material	84-3J	84-3J
Molding Compound Material	G600V	G600V
Lead-Frame Material	CDA194	A194
DAP Surface Prep	Ag Spot Plated	Ag single ring Plated

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 palladium coated copper with gold flash (CuPdAu) as a new bond wire material.

Change Implementation Status: In Progress

Estimated Qualification Completion Date: January 2025

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 2024					**>**	**January 2025**				
Workweek	44	45	46	47	48		1	2	3	4	5
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 13, 2024: 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_ALAN-10KOZF594 Pre_and_Post ChangeSummary.pdf
PCN_ALAN-10KOZF594_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)

MCP3421A0T-E/CHV02
MCP4725A2T-E/CH
MCP4725A3T-E/CH
MCP4725A1T-E/CH
MCP4726A1T-E/CH
MCP4706A1T-E/CH
MCP4726A2T-E/CH
MCP4726A3T-E/CH
MCP4716A2T-E/CH
MCP4706A2T-E/CH
MCP4706A3T-E/CH
MCP4716A3T-E/CH
MCP4726A0T-E/CH
MCP4716A0T-E/CH
MCP4716A1T-E/CH
MCP4706A0T-E/CH
MCP3421A2T-E/CH
MCP4725A0T-E/CH
MCP9510CT-E/CH
MCP9510HT-E/CH
MCP9510HT-E/CHBAA
MCP47DA1T-A0E/OT
MCP47DA1T-A1E/OT
MCP4023T-502E/CH
MCP4022T-103E/CH
MCP4023T-202E/CH
MCP4023T-103E/CH
MCP4023T-503E/CH
MCP4013T-502E/CH
MCP4013T-202E/CH
MCP4013T-103E/CH
MCP4013T-503E/CH
MCP4022T-202E/CH
MCP4022T-502E/CH
MCP4012T-202E/CH
MCP4012T-502E/CH
MCP4012T-103E/CH
MCP3421A0T-E/CH
MCP3425A3T-E/CH
MCP4022T-503E/CH
MCP4012T-503E/CH
MCP3425A0T-E/CH
MCP3421LA0T-E/CH
MCP3421A1T-E/CH
MCP3425A1T-E/CH
MCP3425A2T-E/CH

MCP3421A3T-E/CH

CCB 7276

Pre and Post Change Summary

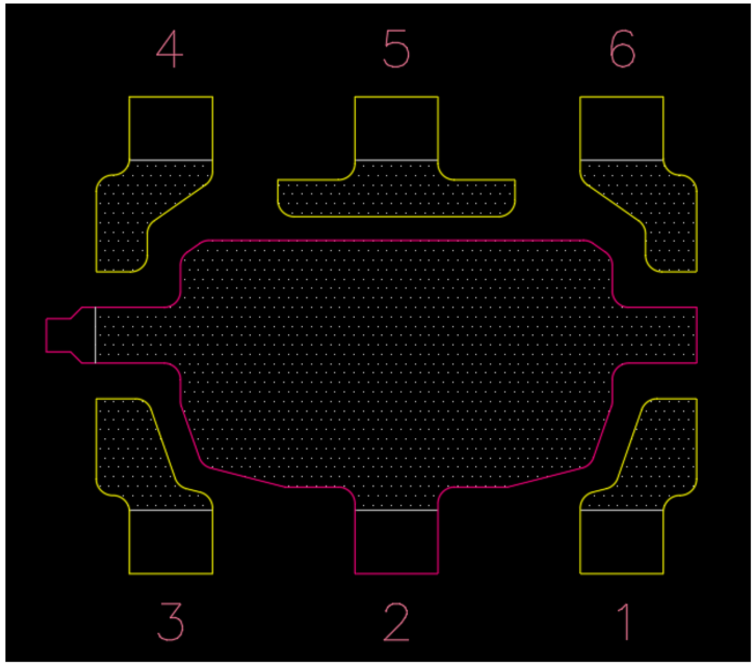
PCN# ALAN-10KOZF594

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

SMART | CONNECTED | SECURE

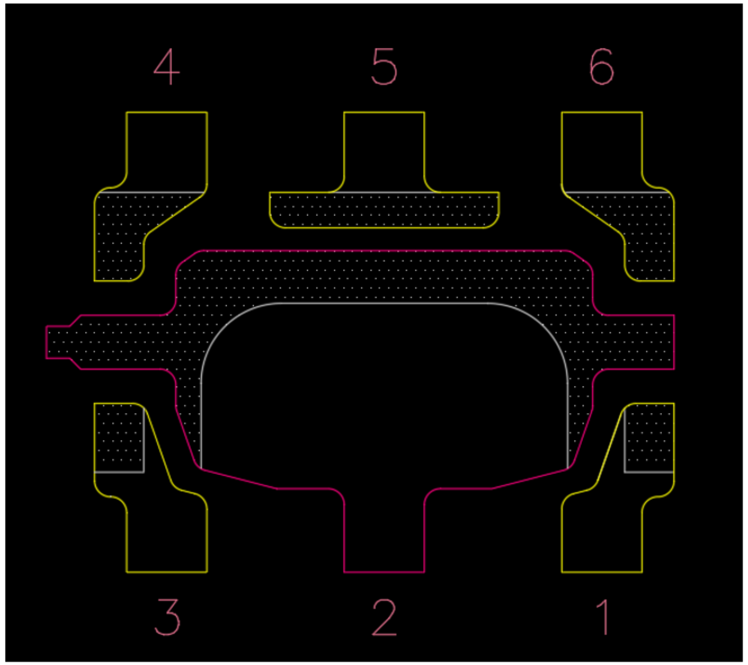
Pre and Post Change Summary

Pre Change



Lead-Frame Material	CDA194
DAP Surface Prep	Ag Spot Plated

Post Change



Lead-Frame Material	A194
DAP Surface Prep	Ag single ring Plated

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

*Not fit to scale

QUALIFICATION PLAN SUMMARY

PCN# ALAN-10KOZF594

Qualification palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP3421, MCP4725, MCP4726, MCP4706, MCP4716, MCP9510, MCP47DA1, MCP4023, MCP4022, MCP4013, MCP4012, and MCP3425 device families available in 6L SOT-23 package.

Purpose: Qualification palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP3421, MCP4725, MCP4726, MCP4706, MCP4716, MCP9510, MCP47DA1, MCP4023, MCP4022, MCP4013, MCP4012, and MCP3425 device families available in 6L SOT-23 package.

CCB No.: 7276

Misc.	Assembly site	MTAI
	BD Number	BD-002754/01
	MP Code (MPC)	DFBE1YC8XAA0
	Part Number (CPN)	MCP4706A0T-E/CH
	MSL information	MSL-1/260
	Assembly Shipping Media	T/R
	Base Quantity Multiple (BQM)	3000
	Reliability Site	MTAI
Lead-Frame	Paddle size	72x41 mils
	Material	A194
	DAP Surface Prep	Ag single ring Plated
	Treatment	BOT
	Process	Stamped
	Lead-lock	No
	Part Number	10100607
	Lead Plating	Matte Tin
	Strip Size	228.288x50.800mm
	Strip Density	192units/strip
Bond Wire	Material	CuPdAu
Die Attach	Part Number	84-3J
	Conductive	No
Backside Coat	Material	8006NS
	Conductive	No
MC	Part Number	G600V
PKG	Package Type	SOT-23
	Pin/Ball Count	6

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
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.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification	0	3	ALL	0	5			
HTSL (High Temp Storage Life)	JESD22-A103. +175 C for 504 hours Electrical test pre and post stress at +25C and hot temp 125C.	45	5	3 (Cu wire qual)	150 (Cu wire qual)	0	10	MTAI	MTAI	
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	231	15	3	738	0	15	MTAI	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 125C.	77	5	3	246	0	10	MTAI	MTAI	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	MTAI	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 125C; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	MTAI	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.