Product Change Notification / JAON-09TGWM044

Date:

13-Sep-2022

Product Category:

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

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5278 Initial Notice: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP3421xxx, MCP3425Axx, MCP401xx, MCP402xx, MCP4706Axx, MCP4716Axx, MCP4725Axx, MCP4726Axx, MCP47DA1T, and MCP9510xx device families available in 6L SOT-23 package assembled at MMT assembly site.

Affected CPNs:

JAON-09TGWM044_Affected_CPN_09132022.pdf
JAON-09TGWM044_Affected_CPN_09132022.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 palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP3421xxx, MCP3425Axx, MCP401xx, MCP402xx, MCP4706Axx, MCP4716Axx, MCP4725Axx, MCP4726Axx, MCP47DA1T, and MCP9510xx device families available in 6L SOT-23 package assembled at MMT assembly site.

Pre and Post Change Summary:

	Pre Change	**Post Change**
Assembly Site	Microchip Technology Thailand (Branch) (MMT)	Microchip Technology Thailand (Branch) (MMT)
Wire Material	Au	CuPdAu
Die Attach Material	84-3J/8006NS	84-3J/8006NS
Molding Compound Material	G600V	G600V
Lead-Frame Material	CDA194	CDA194

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: November 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:

	September 2022					**>**	**November 2022**				
Workweek	36	37	38	39	40		45	46	47	48	49
Initial PCN Issue Date			X								
Qual Report Availability											X
Final PCN Issue											X

Date												

Method to Identify Change: Traceability code

Qualification Plan: Please open the attachments included with this PCN labeled as PCN_#_Qual_Plan.

Revision History: September 13, 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_JAON-09TGWM044_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.

QUALIFICATION PLAN SUMMARY

PCN #: JAON-09TGWM044

Date:
September 01, 2022

Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP3421xxx, MCP3425Axx, MCP401xx, MCP402xx, MCP4706Axx, MCP4716Axx, MCP4725Axx, MCP4726Axx, MCP47DA1T, and MCP9510xx device families available in 6L SOT-23 package assembled at MMT assembly site.

Purpose: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP3421xxx, MCP3425Axx, MCP401xx, MCP402xx, MCP4706Axx, MCP4716Axx, MCP4725Axx, MCP4726Axx, MCP47DA1T, and MCP9510xx device families available in 6L SOT-23 package assembled at MMT assembly site.

CCB No.: 5278

Misc.	**Assembly site**	MMT
	BD Number	BD-000739/01
	MP Code (MPC)	DFBE1YC8XAA0
	Part Number (CPN)	MCP4706A0T-E/CH
	MSL information	MSL-1@260C
	Assembly Shipping Media (T/R, Tube/Tray)	TnR
	Base Quantity Multiple (BQM)	3000
Lead-Frame	**Paddle size**	72x41 mils
	Material	CDA194
	DAP Surface Prep	Ag Spot Plated
	Treatment	No
	Process	Stamped
	Lead-lock	No
	Part Number	10100602
	Lead Plating	Matte Tin
	Strip Size	228.288x50.800mm
	Strip Density	192units/strip
Bond Wire	**Material**	CuPdAu
Die Attach	**Part Number**	84-3J/8006NS
	Conductive	No
MC	**Part Number**	G600V
PKG	**PKG 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	Test Site	Special Instructions
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		5	MMT/MTAI	30 bonds from a minimum of 5 devices.
Wire Sweep		5	0	3	15	0		MMT	Required for any reduction in wire bond thickness.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MMT/ 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 Jedec-STD-020E for package type; Electrical test pre and post stress at +25°C. MSL-1/260C	231	15	3	738	0	15	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	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Unbiased HAST	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	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	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

JAON-09TGWM044 - CC MCP3425/ MCP401xx MCP402xx MCP4706/ MCP4716/ MCP4725/ MCP4726/

Affected Catalog Part Numbers(CPN)

MCP4022T-202E/CH
MCP4022T-502E/CH
MCP4022T-103E/CH
MCP4022T-503E/CH
MCP4023T-202E/CH
MCP4023T-502E/CH
MCP4023T-103E/CH
MCP4023T-503E/CH
MCP4012T-202E/CH
MCP4012T-502E/CH
MCP4012T-103E/CH
MCP4012T-503E/CH
MCP4013T-202E/CH
MCP4013T-502E/CH
MCP4013T-103E/CH
MCP4013T-503E/CH
MCP9510CT-E/CH
MCP9510HT-E/CH
MCP9510HT-E/CHBAA
MCP3421A0T-E/CH
MCP3425A0T-E/CH
MCP3421LA0T-E/CH
MCP3421A1T-E/CH
MCP3425A1T-E/CH
MCP3421A2T-E/CH
MCP3425A2T-E/CH
MCP3421A3T-E/CH
MCP3425A3T-E/CH
MCP4706A0T-E/CH
MCP4706A1T-E/CH
MCP4706A2T-E/CH
MCP4706A3T-E/CH
MCP4716A0T-E/CH
MCP4716A1T-E/CH
MCP4716A2T-E/CH
MCP4716A3T-E/CH
MCP4726A0T-E/CH
MCP4726A1T-E/CH
MCP4726A2T-E/CH
MCP4726A3T-E/CH
MCP4725A0T-E/CH
MCP4725A1T-E/CH

MCP4725A2T-E/CH
MCP4725A3T-E/CH
MCP47DA1T-A0E/OT
MCP47DA1T-A1E/OT