

Product Change Notification / LIAL-25EAAM695

Date:

28-Sep-2022

Product Category:

Memory

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5242 Initial Notice: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected 24LCxxx, 24AAxxx and 24FCxxx device families available in 5L SOT-23 package assembled at MMT assembly site.

Affected CPNs:

LIAL-25EAAM695_Affected_CPN_09282022.pdf LIAL-25EAAM695_Affected_CPN_09282022.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 24LCxxx, 24AAxxx and 24FCxxx device families available in 5L SOT-23 package assembled at MMT assembly site.

Pre and Post Change Summary:

	Pre Change	Post Change		
	Microchip	Microchip		
Assombly Sito	Technology	Technology		
Assembly Sile	Thailand (Branch)	Thailand (Branch)		
	(MMT)	(MMT		
Wire Material	Au	CuPdAu		
Die Attach Material	8390A	8390A		
Molding Compound Material	G600V	G600V		
Lead-Frame Material	CDA194	CDA194		

Impacts to Data Sheet:None

Change ImpactNone

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	3	3	3	3	4		4	4	4	4	4
	6	7	8	9	0		5	6	7	8	9
Initial PCN Issue					Х						
Date											
Qual Report Availability										х	
Final PCN Issue										Х	

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 28, 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_LIAL-25EAAM695_Qual Plan.pdf

Please contact your local Microchip sales office with questions or concerns regarding this notification.

Terms and Conditions:

If you wish to <u>receive Microchip PCNs via email</u> 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 <u>change your PCN profile</u>, <u>including opt out</u>, please go to the <u>PCN home page</u> select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections. LIAL-25EAAM695 - CCB 5242 Initial Notice: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected 24LCxxx, 24AAxxx and 24FCxxx device families available in 5L SOT-23 package assembled at MMT assembly site.

Affected Catalog Part Numbers (CPN)

24LC08BT-I/OTRVE 24AA08T-I/OT 24AA08T-I/OTB22 24LC08BT-E/OT 24LC16BT-I/OT 24AA16T-I/OT 24LC16BT-E/OT 24AA01T-I/OT 24LC02BT-I/OT 24AA02T-I/OT 24LC02BT-E/OT 24LC04BT-I/OT 24LC04BT-I/OTRVE 24AA04T-I/OT 24LC04BT-E/OT 24LC08BT-I/OT 24LC08BHT-I/OT 24AA08HT-I/OT 24LC08BHT-E/OT 24AA16T-I/OT118 24LC16BT-I/OTGYR 24LC16BT-M/OT 24AA16T-E/OT 24LC16BHT-I/OT 24AA16HT-I/OT 24LC16BHT-E/OT 24LC32AT-I/OT 24AA32AT-I/OT 24LC32AT-E/OT 24LC32AFT-I/OT 24AA32AFT-I/OT 24LC32AFT-E/OT 24LC64T-I/OT 24AA64T-I/OT 24FC64T-I/OT 24LC64T-E/OT 24AA64T-E/OT 24LC64FT-I/OT 24AA64FT-I/OT 24FC64FT-I/OT 24LC64FT-E/OT 24AA04T-I/OT103 24LC04BHT-I/OT 24AA04HT-I/OT 24LC04BHT-E/OT 24LC01BT/OT

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24LC01BT-I/OT 24LC01BT-I/OTA24 24LC01BT-E/OT 24AA02T-I/OT103 24LC01BHT-I/OT 24AA01HT-I/OT 24LC01BHT-E/OT 24LC02BHT-I/OT 24AA02E48T-I/OT 24AA02E64T-I/OT 24AA02E64T-I/OT 24AA02E48T-E/OT 24AA02E64T-E/OT 24AA02E64T-E/OT



QUALIFICATION PLAN SUMMARY

PCN #: LIAL-25EAAM695

Date September 15, 2022

Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected 24LCxxx, 24AAxxx and 24FCxxx device families available in 5L 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 24LCxxx, 24AAxxx and 24FCxxx device families available in 5L SOT-23 package assembled at MMT assembly site.

<u>Misc.</u>	Assembly site	MMT				
	BD Number	BD-000740/01				
	MP Code (MPC)	DEDU4YC7XA00				
	Part Number (CPN)	24LC64T-E/OT				
	MSL information	MSL-1@260C				
	Assembly Shipping Media (T/R, Tube/Tray)	TnR				
	Base Quantity Multiple (BQM)	3000				
	CCB No.	5242				
	Paddle size	66x48 mils				
	Material	CDA194				
	DAP Surface Prep	Ag Spot Plated				
	Treatment	No				
Lead-	Process	Stamped				
Frame	Lead-lock	No				
	Part Number	10100502				
	Lead Plating	Matte Tin				
	Strip Size	228.288x50.800mm				
	Strip Density	192units/strip				
Bond Wire	Material	CuPdAu				
Die Attach	Part Number	8390A				
	Conductive	Yes				
MC	Part Number	G600V				
<u>PKG</u>	PKG Type	SOT-23				
	Pin/Ball Count	5				

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	0	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-A10465°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.