



Product Change Notification / LIAL-29JCGD899

Date:

05-Nov-2020

Product Category:

8-bit Microcontrollers

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4439 Initial Notice: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire for selected products available in 8L DFN (4x4x0.9mm) package at MMT assembly site

Affected CPNs:

[LIAL-29JCGD899_Affected_CPN_11052020.pdf](#)

[LIAL-29JCGD899_Affected_CPN_11052020.csv](#)

Notification Text:

PCN Status: Initial notification.

PCN Type:

Manufacturing Change

Microchip Parts Affected:

Please open one of the icons found in the Affected CPNs section above.

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) bond wire for selected products available in 8L DFN (4x4x0.9mm) package at MMT assembly site

Pre Change: Using gold (Au) bond wire

Post Change:Using palladium coated copper with gold flash (CuPdAu) bond wire

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	Microchip Technology Thailand (MMT)	Microchip Technology Thailand (MMT)
Wire material	Au	CuPdAu
Die attach material	3280	3280
Molding compound material	G700LTD	G700LTD
Lead frame material	A194	A194

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve manufacturability by qualifying palladium coated copper with gold flash (CuPdAu) bond wire at MMT assembly site

Change Implementation Status:

In Progress

Estimated Qualification Completion Date:

December 2020

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 2020				December 2020				
Workweek	45	46	47	48	49	51	51	52	53
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 5, 2020: 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-29JCGD899_Qual Plan.pdf](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

Terms and Conditions:

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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)

PIC12F675-E/MD
PIC12F675-I/MD176
PIC12F675-I/MD
PIC12F675T-E/MD
PIC12F629-E/MD
PIC12F629-I/MD
PIC12F629T-I/MD
PIC12F629T-E/MD
PIC12F683-E/MD
PIC12F683-I/MD
PIC12F683T-I/MD
PIC12F635-I/MD
PIC12F635T-I/MD070
PIC12F635T-I/MD073
PIC12F635T-I/MD
PIC12F615-E/MD
PIC12F615-I/MD
PIC12F615-H/MD
PIC12F615T-I/MD029
PIC12F615T-I/MD
PIC12HV615-I/MD
PIC12F609-E/MD
PIC12F609-I/MD
PIC12F609T-I/MD



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QUALIFICATION PLAN SUMMARY

PCN: LIAL-29JCGD899

Date

October 29, 2020

**Qualification of palladium coated copper with gold flash
(CuPdAu) bond wire for selected products available in 8L DFN
(4x4x0.9mm) package at MMT assembly site**

Purpose: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire for selected products available in 8L DFN (4x4x0.9mm) package at MMT assembly site

<u>Misc.</u>	Assembly site	MMT
	BD Number	BDM-002739
	CCB#	4439
	MP Code (MPC)	DE0244M8XAXF
	Part Number (CPN)	PIC12F683-E/MD
	MSL information	MSL-1 @260C
	Assembly Shipping Media (T/R, Tube/Tray)	Tube
	Base Quantity Multiple (BQM)	90
	Reliability Site	MTAI
	<u>Lead-Frame</u>	Paddle size
Material		A194
DAP Surface Prep		Ag selective plated on paddle
Treatment		Roughening
Process		Etched
Lead-lock		Yes
Part Number		10100845
Lead Plating		Matte Tin
Strip Size		70 x 250 mm
Strip Density		700 unit/strip
<u>Bond Wire</u>	Material	CuPdAu
<u>Die Attach</u>	Part Number	3280
	Conductive	Yes
<u>Mold Compound</u>	Part Number	G700LTD
<u>PKG</u>	PKG Type	DFN
	Pin/Ball Count	8
	PKG width/size	4x4x0.9mm

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Special Instructions
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	30 bonds from a min. 5 devices.
Wire Sweep							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	
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 and hot MSL-1 @260	231	15	3	738	0	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 and hot temp. 2X Extended stress Max temp testing at 125C.	77	5	3	246	0	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 2X Extended stress Max temp testing at 125C.	77	5	3	246	0	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 hot temp; 3-gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress. 2X Extended stress Max temp testing at 125C.	77	5	3	246	0	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.