



Product Change Notification / GBNG-26ZXKV002

Date:

28-Sep-2022

Product Category:

Analog to Digital Converters, Digital Temperature Sensors, Linear Comparators, Linear Op Amps, Linear Programmable Gain Amplifiers, Linear Regulators, Power Management - System Supervisors/Voltage Detectors

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5298 and 5298.001 Initial Notice: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected MCP13xx, MCP1824, MCP3021Axx, MCP3221Axx, MCP6xx, TC10xx, TC118xx, TC122xx, TC20xx, TC218xx and TC74Axx device families available in 6L and 5L SOT-23 packages assembled at MMT assembly site.

Affected CPNs:

[GBNG-26ZXKV002_Affected_CPN_09282022.pdf](#)
[GBNG-26ZXKV002_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 MCP13xx, MCP1824, MCP3021Axx, MCP3221Axx, MCP6xx, TC10xx, TC118xx, TC122xx, TC20xx, TC218xx and TC74Axx device families available in 6L and 5L SOT-23 packages assembled at MMT assembly site.

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_GBNG-26ZXKV002_Qual_Plan.pdf](#)

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

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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.



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QUALIFICATION PLAN SUMMARY

PCN #: GBNG-26ZXKV002

**Date:
September 15, 2022**

Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected TC10xx device family available in 6L SOT-23 package assembled at MMT assembly site. The selected MCP13xx, MCP1824, MCP3021Axx, MCP3221Axx, MCP6xx, TC118xx, TC122xx, TC20xx, TC218xx and TC74Axx device families available in 5L SOT-23 package assembled at MMT assembly site will qualify by similarity (QBS).

Purpose: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material for selected TC10xx device family available in 6L SOT-23 package assembled at MMT assembly site. The selected MCP13xx, MCP1824, MCP3021Axx, MCP3221Axx, MCP6xx, TC118xx, TC122xx, TC20xx, TC218xx and TC74Axx device families available in 5L SOT-23 package assembled at MMT assembly site will qualify by similarity (QBS).

<u>Misc.</u>	Assembly site	MMT
	BD Number	BD-000741/01
	MP Code (MPC)	GBAH1YC8XF33
	Part Number (CPN)	TC1073-3.3VCH713
	MSL information	MSL-1@260C
	Assembly Shipping Media (T/R, Tube/Tray)	TnR
	Base Quantity Multiple (BQM)	3000
	CCB No.	5298 and 5298.001
<u>Lead-Frame</u>	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
<u>Bond Wire</u>	Material	CuPdAu
<u>Die Attach</u>	Part Number	8900NC
	Conductive	No
<u>MC</u>	Part Number	G600V
<u>PKG</u>	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	
HTSL (High Temp Storage Life)	JESD22-A103. +175 C for 504 hours. Electrical test pre and post stress at +25°C and hot temp	45	5	3	150	0	25	MTAI	"Must be in progress at time of package release to production, but completion is not required for release to production. 3 lots are required for Cu wire qual. Post-stress Electrical Test Window Time: Within 168 hours. Refer to JESD22-A103 for details.
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.

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
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. Post-stress Electrical Test Window Time: Within 48 hours. Note: For intermediate readouts, devices shall be returned to stress within 96 hours of the end of ramp down. (can be extended to 144 hours, and the time to return to stress to as much as 288 hours by placing the devices in sealed moisture barrier bags without desiccant). Refer to JESD22-A110 for details
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. Post-stress Electrical Test Window Time: Within 48 hours. Note: for intermediate readouts, devices shall be returned to stress within 96 hours of the end of ramp down. (can be extended to 144 hours, and the time to return to stress to as much as 288 hours by placing the devices in sealed moisture barrier bags, the bags should be non-vacuum sealed without a N2 purge and without desiccant). Refer to JESD22-A118 for details.
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.

GBNG-26ZXKV002 - CCB MCP1824 MCP3021/ MCP3221/ MCP6xx TC10xx TC118xx TC122xx

Affected Catalog Part Numbers(CPN)

TC1072-1.8VCH713
TC1072-2.5VCH713
TC1072-2.6VCH713
TC1072-2.7VCH713
TC1072-2.8VCH713
TC1072-2.85VCH713
TC1072-3.0VCH713
TC1072-3.3VCH713
TC1072-3.6VCH713
TC1072-4.0VCH713
TC1072-5.0VCH713
TC1073-1.8VCH713
TC1073-2.5VCH713
TC1073-2.6VCH713
TC1073-2.7VCH713
TC1073-2.8VCH713
TC1073-2.85VCH713
TC1073-3.0VCH713
TC1073-3.3VCH713
TC1073-3.6VCH713
TC1073-4.0VCH713
TC1073-5.0VCH713
MCP606T-I/OT
MCP6271T-E/OT
MCP6L71T-E/OT
MCP6281T-E/OT
MCP6291T-E/OT
MCP1320T-46GE/OT
MCP1320T-46KE/OT
MCP1320T-46LE/OT
MCP1320T-46FE/OT
MCP1320T-25LE/OT
MCP1320T-29BE/OT
MCP1320T-29FE/OT
MCP1320T-29LE/OT
MCP1320T-29ME/OT
MCP1320T-30BE/OT
MCP1320T-30FE/OT
MCP1320T-30LE/OT
MCP1320T-19HI/OT
MCP1320T-31KE/OT
MCP1320T-31LE/OT

MCP1320T-41LE/OT
MCP1320T-42EE/OT
MCP1320T-42JE/OT
MCP1321T-46CE/OT
MCP1321T-46FE/OT
MCP1321T-46GE/OT
MCP1321T-46LE/OT
MCP1321T-26GE/OT
MCP1321T-29AE/OT
MCP1321T-29CE/OT
MCP1321T-29DE/OT
MCP1321T-29FE/OT
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MCP1321T-29ME/OT
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MCP1321T-31LE/OT
MCP1322T-44LE/OT
MCP1322T-46EE/OT
MCP1322T-46LE/OT
MCP1322T-29CE/OT
MCP1322T-29LE/OT
MCP1322T-31GE/OT
MCP1322T-31LE/OT
MCP1322T-32AE/OT
MCP6021T-E/OT
MCP6541UT-E/OT
MCP6546UT-E/OT
MCP601T-I/OT
MCP601T-E/OT
MCP6L1T-E/OT
MCP3221A5T-I/OT
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TC2014-2.6VCTTR
TC2014-2.7VCTTR
TC2014-2.8VCTTR
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TC2014-3.0VCTTR
TC2014-3.3VCTTR
TC2014-5.0VCTTR
TC2015-1.8VCTTR
TC2015-2.5VCTTR
TC2015-2.6VCTTR
TC2015-2.7VCTTR
TC2015-2.8VCTTR
TC2015-2.85VCTTR
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TC2054-1.8VCTTR
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TC2055-2.85VCTTR
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MCP6141T-E/OT
MCP6286T-E/OT
MCP6401T-E/OT
MCP6401UT-E/OT
MCP6441T-E/OT
MCP6L91T-E/OT-HCM
MCP6L91T-E/OT
MCP1316T-20LI/OT
MCP1316T-23LI/OT
MCP1316T-24MI/OT
MCP1316MT-20LI/OT
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MCP1319MT-30GE/OT
MCP1319MT-33AE/OT
MCP1320T-46BE/OT
MCP1320T-27ME/OT
MCP1320T-29GE/OT
MCP1320T-29RE/OT
MCP1322T-27LE/OT
MCP6401T-H/OT
MCP6406T-H/OT
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TC1189RECTTR
TC1189SECTTR
TC1189TECTTR
TC1189TECTTRBAA
TC1188QECTTR
TC1188RECTTR
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TC1017-2.0VCTTR
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TC1017-2.7VCTTR
TC1017-2.8VCTTR
TC1017-2.9VCTTR
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TC1017-4.0VCTTR
TC1017-1.85VCTTR
TC1017-2.85VCTTR
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MCP6561UT-E/OT
MCP6566T-E/OT
TC74A0-3.3VCTTR
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TC74A1-3.3VCTTR
TC74A1-5.0VCTTR
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MCP1824T-3002E/OT
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MCP1824T-5002E/OT
MCP1824T-ADJE/OTAAA
MCP1824T-ADJE/OT