



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.

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|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Date | | | | | | | | | | | | | | |
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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.

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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



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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

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|--------------------------|--|------------------|
| <u>Misc.</u> | 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 |
| <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 | 84-3J/8006NS |
| | 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 | |
| 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. |