Product Change Notification: JAON-26MATN756

Date:

31-Oct-2024

Product Category:

8-Bit Microcontrollers, Analog Temperature Sensors, Capacitive Touch Sensors, Digital Temperature Sensors, Linear Op Amps, Memory

Notification Subject:

CCB 5297 and 5297.001 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material and 8006NS as a new die attach material for selected 24AA0x, 24C01C, 24LC0x, 24VL0x, 25AA0x, 25LC0x, 34AA02, 34LC02, 34VL02, 93AAx, 93C46x, 93C56x, 93C66x, 93C76x, 93C86x, 93LCx, MCP64x, MCP6V1x, MCP6V3x, MCP6V6x, MCP6V7x, MCP6V8x, MCP6V9x, MCP9x, MTCH101, PIC10F20x, PIC10F22x, device families available in 6L and 5L SOT-23 packages assembled at MMT assembly site.

Affected CPNs:

JAON-26MATN756_Affected_CPN_10312024.pdf
JAON-26MATN756_Affected_CPN_10312024.csv

PCN Status: Final 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 and 8006NS as a new die attach material for selected 24AA0x, 24C01C, 24LC0x, 24VL0x, 25AA0x, 25LC0x, 34AA02, 34LC02, 34VL02, 93AAx, 93C46x, 93C56x, 93C66x, 93C76x, 93C86x, 93LCx, MCP64x, MCP6V1x, MCP6V3x, MCP6V6x, MCP6V7x, MCP6V8x, MCP6V9x, MCP9x, MTCH101, PIC10F20x, PIC10F22x, device families available in 6L and 5L SOT-23 packages assembled at MMT assembly site.

Pre and Post Summary Changes:

	Pre Change	Post Change
Assembly Site	Microchip Technology Thailand (Branch) (MMT)	Microchip Technology Thailand (Branch) (MMT)
Wire Material	Au	CuPdAu
Die Attach Material	8900NC	8006NS
Molding Compound Material	G600V	G600V
Lead-Frame Material	CDA194	CDA194

Impacts to Datasheet: 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 and 8006NS as a new die attach material.

Change Implementation Status: In Progress

Estimated First Ship Date: 05 December 2024 (date code: 2449)

Note Below EFSD: Note: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Timetable Summary:

	September 2022					>	**November 2024**				**December 2024**			
Work Week	36	37	38	39	40		45	46	47	48	49	50	51	52
Initial PCN Issue Date					X									

Qual Report Availability							X							
Final PCN Issue Date							X							
Estimated Implementation Date											X			

Method to Identify Change: Traceability Code

Qualification Report: Please open the attachments included with this PCN labeled as PCN_#_Qual_Report.

Revision History: September 28, 2022: Issued initial notification.
November 05, 2024: Issued final notification. Attached the Qualification Report. Updated the affected parts list base on the updated scope. Updated the die attach material in the pre and post change from 8900NC to 8006NS based on the revised form. Provided estimated first ship date to be on December 05, 2024.

Note: The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable product.

Attachments:

PCN_JAON-26MATN756_Qualification Report.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.

MCP6V91UT-E/OT
MCP6V96T-E/OT
MCP6V96UT-E/OT
93LC46AT-I/OT
93AA46AT-I/OT
93AA46AE48T-I/OT
93LC46AT-E/OT
93LC46BT-I/OT
93AA46BT-I/OT
93LC46BT-E/OT
93C46BT-I/OT
93C46BT-E/OT
93C46AT-I/OT
93C46AT-E/OT
93LC56AT-I/OT
93AA56AT-I/OT
93LC56BT-I/OT
93AA56BT-I/OT
93LC56AT-E/OT
93LC56BT-E/OT
93LC66AT-I/OT
93AA66AT-I/OT
93LC66BT-I/OT
93AA66BT-I/OT
93LC66AT-E/OT
93LC66BT-E/OT
93C56AT-I/OT
93C56BT-I/OT
93C56AT-E/OT
93C56BT-E/OT
93C66AT-I/OT
93C66BT-I/OT
93C66AT-E/OT
93C66BT-E/OT
93LC76AT-I/OT
93AA76AT-I/OT
93LC76BT-I/OT
93AA76BT-I/OT
93LC76AT-E/OT
93LC76BT-E/OT
93LC86AT-I/OT
93AA86AT-I/OT
93LC86BT-I/OT
93AA86BT-I/OT
93LC86AT-E/OT
93LC86BT-E/OT

93C76AT-E/OT
93C76BT-E/OT
93C86AT-I/OT
93C86BT-I/OT
93C86AT-E/OT
93C86BT-E/OT
25LC010AT-I/OT
25AA010AT-I/OT
25LC010AT-E/OT
25LC020AT-I/OT
25AA020AT-I/OT
25AA02E48T-I/OT
25AA02E64T-I/OT
25AA02UIDT-I/OT
25LC020AT-E/OT
25LC040AT-I/OT
25AA040AT-I/OT
25LC040AT-E/OT
24VL025T/OT
24LC025T-I/OT
24AA025T-I/OT
24LC025T-E/OT
24VL014T/OT
24LC014T-I/OT
24AA014T-I/OT
24LC014T-E/OT
24C01CT-I/OT
24C01CT-E/OT
24AA025E48T-I/OT
24AA025E64T-I/OT
24AA025UIDT-I/OT
24AA025E48T-E/OT
24AA025E64T-E/OT
34VL02T/OT
34LC02T-I/OT
34AA02T-I/OT
34LC02T-E/OT
34AA02T-E/OT
PIC10F200-E/OT
PIC10F200-I/OT215
PIC10F200-I/OT220
PIC10F200-I/OT223
PIC10F200-I/OT
PIC10F200T-I/OT071
PIC10F200T-I/OT102
PIC10F200T-I/OT108
PIC10F200T-I/OT119

PIC10F200T-I/OT131
PIC10F200T-I/OT151
PIC10F200T-I/OT153
PIC10F200T-I/OT163
PIC10F200T-I/OT169
PIC10F200T-I/OT177
PIC10F200T-I/OT182
PIC10F200T-I/OT185
PIC10F200T-I/OT190
PIC10F200T-I/OT192
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PIC10F200T-E/OT
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PIC10F202T-I/OT065
PIC10F202T-I/OT085
PIC10F202T-I/OT105
PIC10F202T-I/OT108
PIC10F202T-I/OT112
PIC10F202T-I/OT
PIC10F202T-E/OT081

PIC10F202T-E/OT
PIC10F204-E/OT
PIC10F204-I/OT
PIC10F204T-I/OT043
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PIC10F204T-I/OT054
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PIC10F204T-E/OT028
PIC10F204T-E/OT038
PIC10F204T-E/OT050
PIC10F204T-E/OT
PIC10F206-E/OT
PIC10F206-I/OT
PIC10F206T-I/OT030
PIC10F206T-I/OT031
PIC10F206T-I/OT032
PIC10F206T-I/OT041
PIC10F206T-I/OT043
PIC10F206T-I/OT
PIC10F206T-E/OT
PIC10F220-E/OT043
PIC10F220-E/OT
PIC10F220-I/OT
PIC10F220T-I/OT024
PIC10F220T-I/OT027
PIC10F220T-I/OT035
PIC10F220T-I/OT037
PIC10F220T-I/OT040
PIC10F220T-I/OT
PIC10F220T-E/OT030
PIC10F220T-E/OT
PIC10F222-E/OT
MTCH101-I/OT
PIC10F222-I/OT
PIC10F222T-I/OT020
PIC10F222T-I/OT032
PIC10F222T-I/OT033
PIC10F222T-I/OT039
PIC10F222T-I/OT044
PIC10F222T-I/OT045
MTCH101T-I/OT
PIC10F222T-I/OT053
PIC10F222T-I/OT055
PIC10F222T-I/OT056
PIC10F222T-I/OT057
PIC10F222T-I/OT058

JAON-26MATN756 - CCB 5297 and 5297.001 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material and 8006NS as a new die attach material for selected 24AA0x, 24C01C, 24LC0x, 24VL0x, 25AA0x, 25LC0x, 34AA02, 34LC02, 34VL02, 93AAx, 93C46x, 93C56x, 93C66x, 93C76x, 93C86x, 93LCx, MCP64x, MCP6V1x, MCP6V3x, MCP6V6x, MCP6V7x, MCP6V8x, MCP6V9x, MCP9x, MTCH101, PIC10F20x, PIC10F22x, device families available in 6L and 5L SOT-23 packages assembled at MMT assembly site.

PIC10F222T-I/OT

PIC10F222T-E/OT

MCP9509HT-E/OTBAB

MCP6V11T-E/OT

MCP6V11UT-E/OT

MCP6V16T-E/OT

MCP6V16UT-E/OT

MCP6V31T-E/OT

MCP6V31UT-E/OT

MCP6V36T-E/OT

MCP6V36UT-E/OT

MCP9802A0T-M/OT

MCP6471T-E/OT

MCP6481T-E/OT

MCP6491T-E/OT

MCP6421T-E/OT

MCP6V61T-E/OT

MCP6V61UT-E/OT

MCP6V66T-E/OT

MCP6V66UT-E/OT

MCP6V71T-E/OT

MCP6V71UT-E/OT

MCP6V76T-E/OT

MCP6V76UT-E/OT

MCP6V81T-E/OT

MCP6V81UT-E/OT

MCP6V86T-E/OT

MCP6V86UT-E/OT

MCP6V91T-E/OT

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: JAON-26MATN756

Date:
September 5, 2024

Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material and 8006NS as a new die attach material for selected 24AA0x, 24C01C, 24LC0x, 24VL0x, 25AA0x, 25LC0x, 34AA02, 34LC02, 34VL02, 93AAx, 93C46x, 93C56x, 93C66x, 93C76x, 93C86x, 93LCx, MCP64x, MCP6V1x, MCP6V3x, MCP6V6x, MCP6V7x, MCP6V8x, MCP6V9x, MCP9x, MTCH101, PIC10F20x, PIC10F22x, device families available in 6L and 5L SOT-23 packages assembled at MMT assembly site.

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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material and 8006NS as a new die attach material for selected 24AA0x, 24C01C, 24LC0x, 24VL0x, 25AA0x, 25LC0x, 34AA02, 34LC02, 34VL02, 93AAx, 93C46x, 93C56x, 93C66x, 93C76x, 93C86x, 93LCx, MCP64x, MCP6V1x, MCP6V3x, MCP6V6x, MCP6V7x, MCP6V8x, MCP6V9x, MCP9x, MTCH101, PIC10F20x, PIC10F22x, device families available in 6L and 5L SOT-23 packages assembled at MMT assembly site.
CCB No.	5297 and 5297.001
CN	E000210478
QUAL ID	R2400824 Rev. A
MP CODE	DECA14C8XAXF
Part No.	PIC10F220-E/OT
Bonding No.	BD-002055 Rev. 01

Package

Type	6L SOT-23

Lead Frame

Paddle size	72 x 41mils
Material	CDA194
Surface	Ag Ring Plated
Process	Stamped
Lead Lock	No
Part Number	10100607
Treatment	BOT

Material

Epoxy	8006NS
Wire	CuPdAu wire
Mold Compound	G600V
Plating Composition	Matte Sn

MICROCHIP

PACKAGE QUALIFICATION REPORT

Manufacturing Information:

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-250401685.000	TMPE224169414.300	2417A6U (Top Mark: A06U)
MMT-250401686.000	TMPE224169414.300	2417A6V (Top Mark: A06V)
MMT-250401687.000	TMPE224169414.300	2417A7R (Top Mark: A07R)

Result [X] Pass [ ] Fail [ ] _____

6L SOT-23 assembled by MMT pass reliability test per QCI-39000.
This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020E standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Precondition Prior Perform Reliability Tests (At MSL Level 1)	**Electrical Test:** +25°C and 125°C System: J750	JESD22-A113	693(0)	0/693		Good Devices
	Bake 150°C, 24 hrs. System: CHINEE	JIP/ IPC/JEDEC J-STD-020E		693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test: +25°C and 125°C System: J750		693(0)	0/693	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	**Stress Condition:** -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H	JESD22-A104		0/231		Parts had been pre-conditioned at 260°C
	Electrical Test: + 125°C System: J750		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (>2.50 grams)		15(0)	0/15	Pass	
			15(0)	0/15	Pass	
UNBIASED-HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		0/231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: J750		231(0)	0/231	Pass	77 units / lot
HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. **Bias Volt:** 5.5 Volts System: HAST 6000X	JESD22-A110		0/231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C and 125°C System: J750		231(0)	0/231	Pass	77 units / lot

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
High Temperature Storage Life	**Stress Condition:** Bake 175°C, 504 hrs System: CHINEE, TPS Bake Oven **Electrical Test:** +25°C and 125°C System: J750	JESD22-A103	45(0)	0/45 0/45	Pass	45 units
Bond Line Thickness	Bond Line Thickness	SPI-45528	15(0)	15(0)	Pass	5 units / lot
Wire sweep	Wire sweep Inspection 15 Wires / lot	-	45(0) Wires	0/45	Pass	
Bond Strength **Data Assembly**	Wire Pull (>2.50 grams) Bond Shear (>15.00 grams)	Mil. Std. 883-2011 CDF-AEC-Q100-001	30(0) Wires 30(0) bonds	0/30 0/30	Pass Pass	