



## Product Change Notification: DSNO-10JHUT663

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### Date:

19-Sep-2024

### Product Category:

8-Bit Microcontrollers

### Notification Subject:

CCB 7041 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) as an additional bond wire material for selected ATTINY16x, ATTINY204, ATTINY214, ATTINY322, ATTINY4x, ATTINY8x, ABR16EB14, PIC16F131, PIC16F152, PIC16F171, PIC16F180 and PIC16F181 device families available in 14L SOIC (.150in) package at MTAI assembly site.

### Affected CPNs:

**[DSNO-10JHUT663\\_Affected\\_CPN\\_09192024.pdf](#)**  
**[DSNO-10JHUT663\\_Affected\\_CPN\\_09192024.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 an additional bond wire material for selected ATTINY16x, ATTINY204, ATTINY214, ATTINY322, ATTINY4x, ATTINY8x, ABR16EB14, PIC16F131, PIC16F152, PIC16F171, PIC16F180 and PIC16F181 device families available in 14L SOIC (.150in) package at MTAI assembly site.

### Pre and Post Summary Changes:

	Pre Change	Post Change
Assembly Site	Microchip Technology Thailand (HQ) (MTAI)	Microchip Technology Thailand (HQ)

		(MTAI)	
Wire Material	Au	Au	CuPdAu
Die Attach Material	8390A	8390A	
Molding Compound Material	G600V	G600V	
Lead-Frame Material	A194	A194	

**Impacts to Datasheet:** None

**Change Impact:** None

**Reason for Change:** To improve productivity and on-time delivery performance by qualifying palladium coated copper with gold flash (CuPdAu) as an additional bond wire material at MTAI assembly site.

**Change Implementation Status:** In Progress

**Estimated First Ship Date:** 14 November 2024 (date code: 2446)

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

**Timetable Summary:**

	June 2024					>	September 2024					>	November 2024				
Work Week	22	23	24	25	26		36	37	38	39	40		44	45	46	47	48
Initial PCN Issue Date			x														
Qual Report Availability									x								
Final PCN Issue Date									x								



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Affected Catalog Part Numbers (CPN)

PIC16F17125T-I/SL  
PIC16F17125-E/SL  
PIC16F15225-E/SL  
PIC16F15225-I/SL  
PIC16F15225T-I/SL  
PIC16F18025-E/SL  
PIC16F18025-I/SL  
PIC16F18025T-I/SL  
PIC16F13125-E/SL  
PIC16F13125-I/SL  
PIC16F13125T-I/SL  
ATTINY214-SSF  
ATTINY404-SSF  
ATTINY414-SSF  
ATTINY1614-SSF  
ATTINY414-SSFR  
ATTINY404-SSFR  
ATTINY214-SSFR  
ATTINY1614-SSFR  
ATTINY814-SSN  
ATTINY214-SSN  
ATTINY414-SSN  
ATTINY814-SSNR  
ATTINY814-SSNRA1  
ATTINY214-SSNR  
ATTINY414-SSNR  
ATTINY1614-SSNR  
ATTINY804-SSF  
ATTINY804-SSFR  
ATTINY804-SSN  
ATTINY804-SSNR  
PIC16F15224-E/SL  
PIC16F15224-I/SL  
PIC16F15224T-I/SL  
PIC16F15224T-E/SL  
PIC16F18124-I/SL  
PIC16F18124T-I/SL  
PIC16F18124-E/SL  
PIC16F17124-I/SL  
PIC16F17124T-I/SL  
PIC16F17124-E/SL  
PIC16F13124-E/SL  
PIC16F13124-I/SL  
PIC16F13124T-I/SL  
PIC16F18024-E/SL  
PIC16F18024-I/SL

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ATTINY404-SSN  
ATTINY404-SSNR  
PIC16F15223-E/SL  
PIC16F15223-I/SL  
PIC16F15223T-I/SL  
PIC16F13123-E/SL  
PIC16F13123-I/SL  
PIC16F13123T-I/SL  
PIC16F18023-E/SL  
PIC16F18023-I/SL  
PIC16F18023T-I/SL  
ATTINY204-SSF  
ATTINY204-SSFR  
ATTINY204-SSN  
ATTINY204-SSNR  
PIC16F17126-I/SL  
PIC16F17126T-I/SL  
PIC16F17126-E/SL  
PIC16F18126-I/SL  
PIC16F18126T-I/SL  
PIC16F18126-E/SL  
PIC16F18026-E/SL  
PIC16F18026-I/SL  
PIC16F18125-I/SL  
PIC16F18125T-I/SL  
PIC16F18125-E/SL  
PIC16F17125-I/SL  
PIC16F18026T-I/SL  
ATTINY814-SSFR  
ATTINY814-SSF  
ATTINY1614-SSN  
ATTINY824-SSU  
ATTINY824-SSUR  
ATTINY824-SSF  
ATTINY824-SSFR  
ATTINY424-SSU  
ATTINY424-SSUR  
ATTINY424-SSF  
ATTINY424-SSFR  
ATTINY3224-SSU  
ATTINY3224-SSUR  
ATTINY3224-SSF  
ATTINY3224-SSFR  
ATTINY1624-SSU  
ATTINY1624-SSUR  
ATTINY1624-SSF  
ATTINY1624-SSFR  
ATTINY1604-SSF

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ATTINY1604-SSN

ATTINY1604-SSNR

AVR16EB14-E/SL

AVR16EB14-I/SL

AVR16EB14T-I/SL

AVR16EB14T-E/SL



**QUALIFICATION REPORT SUMMARY**  
RELIABILITY LABORATORY

**PCN #: DSNO-10JHUT663**

**Date:**  
**September 12, 2024**

**Qualification of palladium coated copper with gold flash (CuPdAu) as an additional bond wire material for selected ATTINY16x, ATTINY204, ATTINY214, ATTINY322, ATTINY4x, ATTINY8x, ABR16EB14, PIC16F131, PIC16F152, PIC16F171, PIC16F180 and PIC16F181 device families available in 14L SOIC (.150in) package at MTAI assembly site.**



## **MICROCHIP**

### **PACKAGE QUALIFICATION REPORT**

<b>Purpose</b>	Qualification of palladium coated copper with gold flash (CuPdAu) as an additional bond wire material for selected ATTINY16x, ATTINY204, ATTINY214, ATTINY322, ATTINY4x, ATTINY8x, ABR16EB14, PIC16F131, PIC16F152, PIC16F171, PIC16F180 and PIC16F181 device families available in 14L SOIC (.150in) package at MTAI assembly site.
<b>CN</b>	E000232744
<b>QUAL ID</b>	R2400804 Rev. A
<b>MP CODE</b>	59B0G4D3XFB2
<b>Part No.</b>	PIC16F18126-E/SL
<b>Bonding No.</b>	BD-001006 Rev. 01
<b>CCB No.:</b>	7041
<b><u>Package</u></b>	
<b>Type</b>	14L SOIC
<b>Package size</b>	150 mils
<b><u>Lead Frame</u></b>	
<b>Paddle size</b>	104 x 150 mils
<b>Material</b>	A194
<b>Surface</b>	Bare Cu
<b>Process</b>	Stamped
<b>Lead Lock</b>	No
<b>Part Number</b>	10101413
<b>Treatment</b>	Yes
<b><u>Material</u></b>	
<b>Epoxy</b>	8390A
<b>Wire</b>	CuPdAu wire
<b>Mold Compound</b>	G600V
<b>Plating Composition</b>	Matte Sn





## **MICROCHIP**

### **PACKAGE QUALIFICATION REPORT**

#### **Manufacturing Information**

<b>Assembly Lot No.</b>	<b>Wafer Lot No.</b>	<b>Date Code</b>
MTAI251201431.000	GRSM423353547.000	2425HAY
MTAI251201468.000	GRSM423353547.000	2425HEC
MTAI251201470.000	GRSM423353547.000	2425HEE

#### **Result**

☒ Pass ☐ Fail ☐ \_\_\_\_\_

14L SOIC (150 mils) assembled by MTAI 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
<b>Precondition Prior Perform Reliability Tests (At MSL Level 1)</b>	<b>Electrical Test:</b> +25°C, 85°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		
	<b>Electrical Test:</b> +25°C, 85°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	<b>Stress Condition:</b> -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H <b>Electrical Test:</b> +85°C and 125°C System: J750 <b>Bond Strength:</b> Wire Pull (>3.00 grams)	JESD22-A104	231(0)  15(0)	0/231  0/231  0/15	Pass  Pass	Parts had been pre-conditioned at 260°C  77 units / lot
UNBIASED-HAST	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. System: HAST 6000X <b>Electrical Test:</b> +25°C System: J750	JESD22-A118	231(0)	0/231  0/231	Pass	Parts had been pre-conditioned at 260°C  77 units / lot
HAST	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. <b>Bias Volt:</b> 5.5 Volts System: HAST 6000X <b>Electrical Test:</b> +25°C, 85°C and 125°C System: J750	JESD22-A110	231(0)	0/231  0/231	Pass	Parts had been pre-conditioned at 260°C  77 units / lot

## PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>High Temperature Storage Life</b>	<b>Stress Condition:</b> Bake 175°C, 504 hrs. System: CHINEE, TPS Bake Oven	JESD22- A103		0/135		45 units
	<b>Electrical Test:</b> +25°C, 85°C and 125°C System: J750		135(0)	0/135	Pass	