



Product Change Notification - KSRA-01ZVUK607

Date:

16 Aug 2018

Product Category:

8-bit Microcontrollers; Interface- Infrared Products; Interface- Serial Peripherals; Interface- Controller Area Network (CAN); 16-Bit - Microcontrollers and Digital Signal Controllers; Ethernet Controllers; Touch Controllers; Development Tools

Affected CPNs:**Notification subject:**

CCB 3217 and CCB 3217.001 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products available in 18L and 28L SOIC package at MTAI assembly site

Notification text:**PCN Status:**

Final 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 in selected products available in 18L and 28L SOIC package at MTAI assembly site

Pre Change:

Using palladium coated copper wire (PdCu) 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 (HQ) / MTAI	Microchip Technology Thailand (HQ) / MTAI
Wire material	PdCu Wire	CuPdAu Wire
Die attach material	3280	3280
Molding compound material	G600V	G600V
Lead frame material	CDA194	CDA194

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve productivity by qualifying palladium coated copper with gold flash (CuPdAu) bond wire

Change Implementation Status:

In Progress


Estimated First Ship Date:



September 16, 2018 (date code: 1838)

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

Time Table Summary:

Workweek	March 2018						August 2018					September 2018				
	09	10	11	12	13		31	32	33	34	35	36	37	38	39	40
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:

March 08, 2018: Issued initial notification.

August 16, 2018: Issued final notification. Attached the Qualification Report. Revised the affected parts list. Provided estimated first ship date on September 16, 2018.

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

Attachment(s):

[PCN_KSRA-01ZVUK607_Qual_Report.pdf](#)

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

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MICROCHIP

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN#: KSRA-01ZVUK607

Date
August 06, 2018

Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products available in 28L SOIC package at MTAI assembly site. The selected products available in 18L SOIC package will qualify by similarity (QBS).



MICROCHIP PACKAGE QUALIFICATION REPORT

Purpose: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products available in 28L SOIC package at MTAI assembly site. The selected products available in 18L SOIC package will qualify by similarity (QBS)

CN ES199936

QUAL ID Q18097

MP CODE LEAE2TN3XB04

Part No. PIC16F726T-I/SO

Bonding No. BDM-001818

CCB No. 3227

Package

Type 28L SOIC

Package size 300 mils

Die thickness 15 mils

Die size 85.0 x 77.9 mils

Lead Frame

Paddle size 200 x 240 mils

Material CDA194

Surface Bare Cu

Process Stamped

Lead Lock Yes

Part Number 10102807

Treatment Brown Oxide Treatment

Material

Epoxy 3280

Wire CuPdAu wire

Mold Compound G600

Plating Composition Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MTAI190803756.000	GRSM418271881.700	18211VK
MTAI190804011.000	GRSM418271881.700	182184E
MTAI190804012.000	GRSM418271881.700	1821859

Result Pass Fail _____

28L SOIC (.300") 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-020D standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020D)	IPC/JEDEC J-STD-020D	135	0/135	Pass	
<u>Precondition Prior Perform Reliability Tests</u> (At MSL Level 1)	Electrical Test :+25°C,85°C and -40°C System: J750 Bake 150°C, 24 hrs System: CHINEE 85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 Electrical Test :+25°C and 85°C System: J750	JESD22-A113	693(0)	693 693 693 0/693	 Pass	Good Devices
Temp Cycle	Stress Condition: -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H Electrical Test: + 85°C System: J750 Bond Strength: Wire Pull (> 2.5 grams) Bond Shear (>15.00 grams)	JESD22-A104	 231(0) 15 (0) 15 (0)	231 0/231 0/15 0/15	 Pass Pass Pass	Parts had been pre-conditioned at 260°C 77 units / lot
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X Electrical Test: +25°C System: J750	JESD22-A118	 231(0)	231 0/231	 Pass	Parts had been pre-conditioned at 260°C 77 units / lot
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.5 Volts System: HAST 6000X Electrical Test: + 25°C ,85°C System: J750	JESD22-A110	 231(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
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB	JESD22- A103		45		45 units
	Electrical Test :+25°C and 85°C System: J750		45(0)	0/45	Pass	
Bond Strength Data Assembly	Wire Pull (> 2.5 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>15.00 grams)	JESD22- B116	30 (0) bonds	0/30	Pass	

Affected Catalog Part Numbers (CPN)

CF745-04/SO
MCP2140A-I/SO
MCP2140AT-I/SO
MCP2140-I/SO
MCP2140-I/SORVB
MCP2140T-I/SO
MCP2140T-I/SORVB
MCP23008-E/SO
MCP23008T-E/SO
MCP23S08-E/SO
MCP23S08T-E/SO
MCP2515-E/SO
MCP2515-E/SORB2
MCP2515-E/SORB4
MCP2515-I/SO
MCP2515-I/SORB2
MCP2515-I/SORB4
MCP2515T-E/SO
MCP2515T-E/SORB2
MCP2515T-E/SORB4
MCP2515T-I/SO
MCP2515T-I/SORB2
MCP2515T-I/SORB4
MCV18A-I/SO
PIC16C54C-04/SO
PIC16C54C-04/SOC04
PIC16C54C-04E/SO
PIC16C54C-04I/SO
PIC16C54C-20/SO
PIC16C54C-20E/SO
PIC16C54C-20I/SO
PIC16C54C-40/SO
PIC16C54CT-04/SO
PIC16C54CT-04/SO098
PIC16C54CT-04I/SO
PIC16C54CT-04I/SO104
PIC16C54CT-04I/SO158
PIC16C54CT-20/SO
PIC16C54CT-20/SO068
PIC16C56A-04/SO
PIC16C56A-04E/SO
PIC16C56A-04I/SO
PIC16C56A-20/SO
PIC16C56A-20E/SO
PIC16C56A-20I/SO
PIC16C56A-40/SO

PIC16C56AT-04/SO
PIC16C56AT-04/SO027
PIC16C56AT-04I/SO
PIC16C56AT-04I/SO030
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PIC16C56AT-04I/SO040
PIC16C58B-04/SO
PIC16C58B-04E/SO
PIC16C58B-04I/SO
PIC16C58B-20/SO
PIC16C58B-20E/SO
PIC16C58B-20I/SO
PIC16C58B-40/SO
PIC16C58BT-04/SO
PIC16C58BT-04I/SO
PIC16C620A-04/SO
PIC16C620A-04E/SO
PIC16C620A-04I/SO
PIC16C620A-20/SO
PIC16C620A-20E/SO
PIC16C620A-20I/SO
PIC16C620A-40/SO
PIC16C620AT-04/SO
PIC16C620AT-04/SO058
PIC16C620AT-04I/SO
PIC16C620AT-04I/SO076
PIC16C620AT-04I/SO077
PIC16C620AT-20/SO
PIC16C620AT-20I/SO
PIC16C621A-04/SO
PIC16C621A-04E/SO
PIC16C621A-04I/SO
PIC16C621A-20/SO
PIC16C621A-20E/SO
PIC16C621A-20I/SO
PIC16C621A-40/SO
PIC16C621AT-04/SO
PIC16C621AT-04E/SO
PIC16C621AT-04I/SO
PIC16C621AT-04I/SO050
PIC16C621AT-04I/SO081
PIC16C621AT-04I/SO088
PIC16C621AT-20/SO
PIC16C621AT-20I/SO
PIC16C621AT-20I/SO051
PIC16C621AT-20I/SO060
PIC16C621AT-20I/SO086
PIC16C622A-04/SO
PIC16C622A-04E/SO

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PIC16C622AT-04I/SO
PIC16C622AT-04I/SO091
PIC16C622AT-04I/SO092
PIC16C622AT-04I/SO093
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PIC16C622AT-20/SO
PIC16C622AT-20/SOC03
PIC16C622AT-20E/SO
PIC16C622AT-20I/SO
PIC16CR54CT-20/SO012
PIC16CR58BT-04/SO074
PIC16CR620AT-04I/SO020
PIC16F1826-E/SO
PIC16F1826-I/SO
PIC16F1826T-E/SO
PIC16F1826T-I/SO
PIC16F1826T-I/SO027
PIC16F1827-E/SO
PIC16F1827-I/SO
PIC16F1827-I/SOC06
PIC16F1827T-E/SO
PIC16F1827T-I/SO
PIC16F1827T-I/SOC06
PIC16F1847-E/SO
PIC16F1847-I/SO
PIC16F1847-I/SOC02
PIC16F1847T-E/SO
PIC16F1847T-I/SO
PIC16F54-E/SO
PIC16F54-I/SO
PIC16F54-I/SO023
PIC16F54-I/SO043
PIC16F54T-E/SO
PIC16F54T-E/SO040
PIC16F54T-I/SO
PIC16F54T-I/SO028
PIC16F54T-I/SO036
PIC16F54T-I/SO042
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PIC16F628AT-I/SO052
PIC16F716-E/SO
PIC16F716-I/SO
PIC16F716-I/SO4AP
PIC16F716T-E/SO
PIC16F716T-I/SO
PIC16F716T-I/SO048
PIC16F716T-I/SO061
PIC16LC54C-04/SO
PIC16LC54C-04I/SO
PIC16LC54CT-04/SO150
PIC16LC56A-04/SO
PIC16LC56A-04I/SO
PIC16LC58B-04/SO
PIC16LC58B-04I/SO
PIC16LC620A-04/SO
PIC16LC620A-04I/SO
PIC16LC620AT-04/SO
PIC16LC621A-04/SO
PIC16LC621A-04I/SO
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PIC16LC621AT-04I/SO
PIC16LC622A-04/SO
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DSPIC30F2010T-30I/SO
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DSPIC33FJ32MC202-I/SO
DSPIC33FJ32MC202-I/SO022
DSPIC33FJ32MC202-I/SO023
DSPIC33FJ32MC202-I/SOC21
DSPIC33FJ32MC202T-E/SO
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DSPIC33FJ64GP202-I/SO
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DSPIC33FJ64GP802-E/SO
DSPIC33FJ64GP802-H/SO
DSPIC33FJ64GP802-I/SO
DSPIC33FJ64GP802-I/SO031
DSPIC33FJ64GP802-I/SO043
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DSPIC33FJ64GP802T-H/SO
DSPIC33FJ64GP802T-I/SO
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DSPIC33FJ64MC802-E/SO
DSPIC33FJ64MC802-H/SO
DSPIC33FJ64MC802-I/SO
DSPIC33FJ64MC802T-E/SO
DSPIC33FJ64MC802T-H/SO
DSPIC33FJ64MC802T-I/SO
ENC28J60-I/SO
ENC28J60-I/SOC02
ENC28J60-I/SOC04
ENC28J60T-I/SO
ESE0009SIF/E0E42
ESE0009SIF/E0E58
ESE0009SIF/E0E5A
HA1630-I/SO
HA1630T-I/SO
HA1631-I/SO
HA1631T-I/SO
HA3089-I/SO
HA3099/SO
HA4412-I/SO
HA4412T-I/SO
HA4581-I/SO
HA4581T-I/SO
HA4582-I/SO

HCC2-009SIJ/C2C49TR
HCC2-009SIJ/C2C59
HCC2-009SIJ/C2C59TR
HCC2-009SIJ/C2C5D
HCC2-009SIJ/C2C5DTR
HCD0-00ESI/D0C4A
HCD2-00ESI/D2C53
HCD2-00ESI/D2C53TR
HCD2-00ESI/D2C5B
HCD2-00ESI/D2C5BTR
HCD2-00ESI/D2C60
HCD2-00ESI/D2C60TR
HSA0-040SDA/A0SA10
HSA0-040SDA/A0SA10TR
HSA0-040SIA/A0S1F
HSA0-040SIA/A0S1FTR
HSA0-040SIA/A0SS10
HSA0-040SIA/A0SS10TR
HSA0100SD/A0SA0B
HSA0100SI/A0SS0B
HSA0100SI/A0SS0BTR
HSA0100SI/ER1718
HSA0100SI/ER2013
HSA2-040SAA/A2320A
HSA2-040SAA/A2320ATR
HSA2-040SAA/A2323
HSA2-040SAA/A2323TR
HSA2-040SAA/A2324
HSA2-040SAA/A2324TR
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HSA2-040SIA/A2S20
HSA2-040SIA/A2S20A
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HSA2-040SIA/A2S23TR
HSA2-040SIA/A2S24
HSA2-040SIA/A2S24TR
HSA2-0C0SDA/A2S21
HSA2-0C0SIA/A2S20A
HSA2-0C0SIA/A2S23
HSA2-0C0SIA/A2S24
HSA2-0C0SIA/A2S24TR
HSA2-240SIA/A2S1FA
HSC2-009SIJ/C2S47
HSC2-009SIJ/C2S51
HSC2-009SIJ/C2S51TR
MCP23016-I/SO

MCP23016T-I/SO
MCP23017-E/SO
MCP23017T-E/SO
MCP23018-E/SO
MCP23018T-E/SO
MCP23S17-E/SO
MCP23S17T-E/SO
MCP23S18-E/SO
MCP23S18T-E/SO
MCV28A-I/SO
PIC14000-04/SO
PIC14000-04I/SO
PIC14000-20/SO
PIC14000-20I/SO
PIC14000T-04/SO
PIC14000T-04I/SO
PIC16C55A-04/SO
PIC16C55A-04I/SO
PIC16C55A-20/SO
PIC16C55A-20I/SO
PIC16C55A-40/SO
PIC16C55AT-04/SO
PIC16C55AT-20/SO
PIC16C55AT-20I/SO
PIC16C57C-04/SO
PIC16C57C-04E/SO
PIC16C57C-04I/SO
PIC16C57C-04I/SOC05
PIC16C57C-20/SO
PIC16C57C-20/SO040
PIC16C57C-20E/SO
PIC16C57C-20I/SO
PIC16C57C-40/SO
PIC16C57CT-04/SO
PIC16C57CT-04I/SO
PIC16C57CT-20I/SO
PIC16C62B-04/SO
PIC16C62B-04I/SO
PIC16C62B-20/SO
PIC16C62B-20I/SO
PIC16C62BT-04/SO047
PIC16C62BT-20/SO
PIC16C63-04/SO
PIC16C63-04E/SO
PIC16C63-04I/SO
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PIC16C63A-04I/SO
PIC16C63A-20/SO
PIC16C63A-20E/SO
PIC16C63A-20I/SO
PIC16C63AT-04/SO
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