Product Change Notification - JAON-22CDLC928

Date: 31 Jan 2018

Product Category: 8-bit PIC Microcontrollers; Interface- Serial Peripherals; Interface- Controller Area Network (CAN)

Notification subject: CCB 3000 Final Notice: Qualification of MMT as an additional assembly site using CuPdAu bond wire in selected products of the 150K and 160K wafer technologies available in 28L SSOP package.

Notification text:

PCN Status:
Final notification

PCN Type:
Manufacturing Change

Microchip Parts Affected:
Please open the attachments found in the attachments field below labeled as PCN_#_Affected_CPN.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

Description of Change:
Qualification of MMT as an additional assembly site using palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 150K and 160K wafer technologies available in 28L SSOP package.

Pre Change:
Assembled at MTAI using palladium coated copper (PdCu) bond wire.

Post Change:
Assembled at MTAI using palladium coated copper (PdCu) bond wire or assembled at MMT 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	Microchip Technology Thailand Branch (MMT)
Wire material	PdCu Wire	PdCu Wire	CuPdAu Wire
Die attach material	3280	3280	3280
Molding compound material	G600	G600	G600
Lead frame material	CDA194	CDA194	CDA194

Impacts to Data Sheet:
None

Change Impact:
None

Reason for Change:
To improve productivity by qualifying MMT as an additional assembly site using palladium coated copper with gold flash (CuPdAu) bond wire.

Change Implementation Status:
In Progress

Estimated First Ship Date:
February 28, 2018 (date code: 1809)

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

Time Table Summary:

	July 2017				**-->**	**January 2018**					**February 2018**			
Workweek	27	28	29	30		01	02	03	04	05	06	07	08	09
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:
July 6, 2017: Issued initial notification.
January 31, 2018: Issued final notification. Attached the qualification report. Provided estimated first ship date to be on February 28, 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_JAON-22CDLC928_Qual_Report.pdf
PCN_JAON-22CDLC928_Affected CPN.pdf
PCN_JAON-22CDLC928_Affected CPN.xlsx

Please contact your local Microchip sales office with questions or concerns regarding this notification.

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Affected Catalog Part Numbers (CPN)

PCN_JAON-22CDLC928
CATALOG_PART_NBR
HA1930-I/SS
HA1930T-I/SS
HA4315T-I/SS
HA4315T-I/SS022
MCP23016-I/SS
MCP23016T-I/SS
MCP23017-E/SS
MCP23017T-E/SS
MCP23S17-E/SS
MCP23S17T-E/SS
MCP25625-E/SS
MCP25625T-E/SS
PIC16F570-E/SS
PIC16F570-I/SS
PIC16F570T-I/SS
PIC16F57-E/SS
PIC16F57-I/SS
PIC16F57T-E/SS
PIC16F57T-I/SS
PIC16F57T-I/SS024
PIC16F57T-I/SS025
PIC16F57T-I/SS027
PIC16F72-E/SS
PIC16F72-I/SS
PIC16F72-I/SS085
PIC16F72T-E/SS
PIC16F72T-I/SS
PIC16F72T-I/SS085
PIC16F737-I/SS
PIC16F737T-I/SS
PIC16F73-E/SS
PIC16F73-I/SS
PIC16F73T-E/SS
PIC16F73T-I/SS
PIC16F73T-I/SS155
PIC16F73T-I/SSC15
PIC16F767-E/SS
PIC16F767-I/SS
PIC16F767T-I/SS
PIC16F76-E/SS
PIC16F76-I/SS
PIC16F76T-E/SS
PIC16F76T-I/SS
PIC16F873A-E/SS
PIC16F873A-I/SS

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Affected Catalog Part Numbers (CPN)

PCN_JAON-22CDLC928
CATALOG_PART_NBR
PIC16F873AT-I/SS
PIC16F876A-E/SS
PIC16F876A-I/SS
PIC16F876AT-E/SS
PIC16F876AT-I/SS
PIC16F876AT-I/SSC36
PIC16F882-E/SS
PIC16F882-I/SS
PIC16F882T-E/SS
PIC16F882T-I/SS
PIC16F883-E/SS
PIC16F883-I/SS
PIC16F883-I/SS046
PIC16F883-I/SS063
PIC16F883-I/SS064
PIC16F883T-E/SS
PIC16F883T-I/SS
PIC16F883T-I/SS022
PIC16F883T-I/SS063
PIC16F883T-I/SS064
PIC16F883T-I/SS070
PIC16F883T-I/SS071
PIC16F886-E/SS
PIC16F886-I/SS
PIC16F886T-E/SS
PIC16F886T-I/SS
PIC16F886T-I/SS026
PIC16F886T-I/SS052
PIC16F886T-I/SS056
PIC16F886T-I/SSC07
PIC16F913-E/SS
PIC16F913-I/SS
PIC16F913T-E/SS
PIC16F913T-I/SS
PIC16F913T-I/SS025
PIC16F913T-I/SS027
PIC16F913T-I/SS032
PIC16F916-E/SS
PIC16F916-I/SS
PIC16F916-I/SS035
PIC16F916T-I/SS
PIC16F916T-I/SS028
PIC16F916T-I/SS029
PIC16F916T-I/SS031
PIC16F916T-I/SS033

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Affected Catalog Part Numbers (CPN)

PCN_JAON-22CDLC928
CATALOG_PART_NBR
PIC16F916T-I/SS035
PIC16LF72-I/SS
PIC16LF72T-I/SS
PIC16LF737-I/SS
PIC16LF737T-I/SS
PIC16LF737T-I/SS021
PIC16LF73-I/SS
PIC16LF73T-I/SS
PIC16LF767-I/SS
PIC16LF767T-I/SS
PIC16LF76-I/SS
PIC16LF76T-I/SS
PIC16LF873A-I/SS
PIC16LF873AT-I/SS
PIC16LF876A-I/SS
PIC16LF876AT-I/SS
PIC16LF876AT-I/SSC26
PIC18F2221-E/SS
PIC18F2221-I/SS
PIC18F2221T-I/SS
PIC18F2321-E/SS
PIC18F2321-I/SS
PIC18F2321T-E/SS
PIC18LF2221-I/SS
PIC18LF2221T-I/SS
PIC18LF2321-I/SS
PIC18LF2321T-I/SS
PS501T-I/SSC01
PS501T-I/SSC05

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: JAON-22CDLC928

Date
January 04, 2018

Qualification of MMT as an additional assembly site using palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 150K and 160K wafer technologies available in 28L SSOP package.

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of MMT as an additional assembly site using palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 150K and 160K wafer technologies available in 28L SSOP package.
CN	ES114931
QUAL ID	Q17183
MP CODE	DEBY14N2XAXF
Part No.	PIC18F2321-E/SS
Bonding No.	BDM-001363 Rev. A
CCB No.	3000
Package	
Type	28L SSOP
Package size	209 mils
Die thickness	15 mils
Die size	129.90 x 124.10 mils
Lead Frame	
Paddle size	153 x 200 mils
Material	CDA194
Surface	Bare Cu
Process	Stamp
Lead Lock	No
Part Number	10102834
Treatment	BOT
Material	
Epoxy	3280
Wire	CuPdAu wire
Mold Compound	G600
Plating Composition	Matte Tin

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-182901098.000	TMPE217366804.900	1741804
MMT-182901099.000	TMPE217366804.900	174193U
MMT-183000606.000	TMPE218064822.000	1742E0B

Result [X] Pass [ ] Fail [ ] ____________________

28L SSOP (.209”) 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-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	

Precondition Prior Perform Reliability Tests (At MSL Level 1)	**Electrical Test :**+25°C and 125°C System: J750	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE			693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max			693		
	System: Vitronics Soltec MR1243					
	Electrical Test :+25°C and 125°C System: J750			0/693	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	**Stress Condition:** (Standard) -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H	JESD22- A104		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 (> 2.5 grams)		15 (0)	0/15	Pass	
	Bond Shear (>15.00 grams)		15 (0)	0/15	Pass	
UNBIASED-HAST	**Stress Condition:** (Standard) +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22- A118		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:** (Standard) +130°C/85%RH, 96 hrs. **Bias Volt:** 5.5 Volts System: HAST 6000X	JESD22- A110		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: SHEL LAB	JESD22-A103		45		45 units
	Electrical Test :+25°C and 125°C System: J750		45(0)	0/45	Pass	
Physical Dimensions	Physical Dimension, 30 units from 1 lot	JESD22-B100/B108	30(0) Units	0/30	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	