

Product Change Notification - JAON-03TOQC783

Date: 23 Oct 2017

Product Category: 16-Bit - Microcontrollers and Digital Signal Controllers; Ethernet Controllers; Wireless Modules; 8-bit PIC Microcontrollers

Notification subject: CCB 3002 Final Notice: Qualification of MMT as an additional assembly site using CuPdAu bond wire in selected products of the 0.25um TSMC wafer technology available in 28L SSOP package.

Notification text: **PCN Status:**
Final notification

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 0.25um TSMC wafer technology 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:

November 24, 2017 (date code: 1747)

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

Time Table Summary:

	July 2017				-->	October 2017				November 2017			
	27	28	29	30		40	41	42	43	44	45	46	47
Workweek													
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.

October 23, 2017: Issued final notification. Provided estimated first ship date to be on November 24, 2017.

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-03TOQC783_Qual_Report.pdf](#)
- [PCN_JAON-03TOQC783_Affected_CPN.pdf](#)
- [PCN_JAON-03TOQC783_Affected_CPN.xls](#)

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MICROCHIP

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: JAON-03TOQC783

Date
October 14, 2017

Qualification of MMT as an additional assembly site using palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 0.25um TSMC wafer technology available in 28L SSOP package.



MICROCHIP 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 0.25um TSMC wafer technology available in 28L SSOP package.
CN	ES114926-21855
QUAL ID	Q17144
MP CODE	YGAU14N2XCKA
Part No.	DSPIC33FJ32MC202-E/SS
Bonding No.	BDM-001365 Rev. C
CCB No.	3002
<u>Package</u>	
Type	28L SSOP
Package size	209 mils
Die thickness	15 mils
Die size	135.00 x 136.00 mils
<u>Lead Frame</u>	
Paddle size	153 x 200 mils
Material	CDA194
Surface	Bare Cu
Process	Stamped
Lead Lock	No
Part Number	10102834
Treatment	Roughened
<u>Material</u>	
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
MMT-182000735.000	TC11918095128.120	17320KT
MMT-182000937.000	TC11918095128.120	17323P7
MMT-182100001.000	TC11918095128.100	17330KU

Result

Pass Fail _____

28L SSOP (.209") assembled by MMT (NSEB) 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 C J-STD- 020D	135	0/135	Pass	

Precondition Prior Perform Reliability Tests (At MSL Level 1)	Electrical Test :+25°C,85°C and 125°C System: J750	JESD22- A113	693(0)	693	Pass	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 System: Vitronics Soltec MR1243			693		
	Electrical Test :+25°C,85°C and 125°C System: J750			0/693		

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: + 85°C and 125°C System: J750		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (> 2.5 grams) Bond Shear (>15.00 grams)		15 (0)	0/15	Pass	
			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: 3.6 Volts System: HAST 6000X	JESD22- A110		231		Parts had been pre-conditioned at 260°C
	Electrical Test: + 25°C ,85°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,85°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	

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Affected Catalog Part Numbers (CPN)

PCN_JAON-03TOQC783
CATALOG_PART_NBR
DSPIC33FJ12GP202-E/SS
DSPIC33FJ12GP202-I/SS
DSPIC33FJ12GP202T-E/SS
DSPIC33FJ12GP202T-I/SS
DSPIC33FJ12MC202-E/SS
DSPIC33FJ12MC202-I/SS
DSPIC33FJ12MC202T-E/SS
DSPIC33FJ12MC202T-I/SS
DSPIC33FJ16GP102-I/SS
DSPIC33FJ16MC102-E/SS
DSPIC33FJ16MC102-I/SS
DSPIC33FJ16MC102T-I/SS
DSPIC33FJ32GP102-I/SS
DSPIC33FJ32GP202-E/SS
DSPIC33FJ32GP202-I/SS
DSPIC33FJ32GP202T-E/SS
DSPIC33FJ32GP202T-I/SS
DSPIC33FJ32MC102-I/SS
DSPIC33FJ32MC202-E/SS
DSPIC33FJ32MC202-E/SSC25
DSPIC33FJ32MC202-I/SS
DSPIC33FJ32MC202-I/SSC24
DSPIC33FJ32MC202T-E/SS
DSPIC33FJ32MC202T-I/SS
ENC28J60/SS
ENC28J60-I/SS
ENC28J60T/SS
ENC28J60T-I/SS
MCW1001A-I/SS
MCWA01-I/SS800
MCWA01T-I/SS800
PIC18F24J10-I/SS
PIC18F24J10T-I/SS
PIC18F24J11-I/SS
PIC18F24J11T-I/SS
PIC18F24J50-I/SS
PIC18F24J50T-I/SS
PIC18F25J10-I/SS
PIC18F25J10T-I/SS
PIC18F25J11-I/SS
PIC18F25J11T-I/SS
PIC18F25J50-I/SS
PIC18F25J50-I/SS022
PIC18F25J50-I/SS024
PIC18F25J50-I/SS027

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Affected Catalog Part Numbers (CPN)

PCN_JAON-03TOQC783
CATALOG_PART_NBR
PIC18F25J50-I/SS028
PIC18F25J50-I/SS029
PIC18F25J50-I/SS030
PIC18F25J50T-I/SS
PIC18F26J11-I/SS
PIC18F26J11T-I/SS
PIC18F26J13-I/SS
PIC18F26J13T-I/SS
PIC18F26J50-I/SS
PIC18F26J50-I/SS020
PIC18F26J50T-I/SS
PIC18F26J50T-I/SS020
PIC18F26J50T-I/SS033
PIC18F26J50T-I/SS034
PIC18F26J53-I/SS
PIC18F26J53T-I/SS
PIC18F27J13-I/SS
PIC18F27J13T-I/SS
PIC18F27J53-I/SS
PIC18F27J53T-I/SS
PIC18LF24J10-I/SS
PIC18LF24J11-I/SS
PIC18LF24J11T-I/SS
PIC18LF24J50-I/SS
PIC18LF24J50T-I/SS
PIC18LF25J10-I/SS
PIC18LF25J10T-I/SS
PIC18LF25J10T-I/SS032
PIC18LF25J10T-I/SS033
PIC18LF25J10T-I/SS035
PIC18LF25J10T-I/SS038
PIC18LF25J10T-I/SS039
PIC18LF25J10T-I/SS040
PIC18LF25J10T-I/SS041
PIC18LF25J10T-I/SS042
PIC18LF25J11-I/SS
PIC18LF25J11T-I/SS
PIC18LF25J50-I/SS
PIC18LF25J50T-I/SS
PIC18LF26J11-I/SS
PIC18LF26J11T-I/SS
PIC18LF26J13-I/SS
PIC18LF26J13T-I/SS
PIC18LF26J50-I/SS
PIC18LF26J50T-I/SS

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Affected Catalog Part Numbers (CPN)

PCN_JAON-03TOQC783
CATALOG_PART_NBR
PIC18LF26J53-I/SS
PIC18LF26J53T-I/SS
PIC18LF27J13-I/SS
PIC18LF27J13T-I/SS
PIC18LF27J53-I/SS
PIC18LF27J53T-I/SS
PIC24FJ16MC102-E/SS
PIC24FJ16MC102-I/SS
PIC24FJ16MC102T-I/SS
PIC24FJ32MC102-I/SS
PIC24HJ12GP202-E/SS
PIC24HJ12GP202-I/SS
PIC24HJ12GP202T-E/SS
PIC24HJ12GP202T-I/SS
PIC24HJ32GP202-E/SS
PIC24HJ32GP202-I/SS
PIC24HJ32GP202T-E/SS
PIC24HJ32GP202T-I/SS