English

PRODUCTS APPLICATIONS DESIGN SUPPORT TRAINING SAMPLE & BUY AB

Product Change Notification - JAON-03UTRS739 (Printer Friendly)

Date: 09 Mar 2015

Notification subject: CCB 1155.38 Final Notice: Qualification of palladium coated copper (PdCu) bond wire and 3 120K and 121K wafer technologies available in 14L SOIC package

Notification text:

PCN Status:
Final notification

Microchip Parts Affected:
See attachments of affected catalog part numbers (CPN) labeled as…
PCN_JAON-03UTRS739_Affected_CPN.xls
PCN_JAON-03UTRS739_Affected_CPN.pdf

Description of Change:
Qualification of palladium coated copper (PdCu) bond wire and 3280 die attach epc 121K wafer technologies available in 14L SOIC package at MTAI assembly site.

NOTE: Selected products are non-automotive devices. Please review the affected parts affected.

Pre Change:
Gold wire and 8390A die attach epoxy

Post Change:
PdCu wire and 3280 die attach epoxy or Gold wire and 8390A die attach epoxy.

Impacts to Data Sheet:
None

Reason for Change:
To improve manufacturability and qualify PdCu bond wire at MTAI assembly site.

Change Implementation Status:
In Progress

Estimated First Ship Date:
March 23, 2015 (date code: 1513)

NOTE: Please be advised that after the estimated first ship date customers may re

Markings to Distinguish Revised from Unrevised Devices:
Traceability code

Revision History:
October 31, 2014: Issued initial notification using the Notification ID JAON-15PAQ
March 06, 2015: Issued final notification using the Notification ID JAON-03UTRS73 only include the qualification of 120K and 121K wafer technology. Added the qualifi

subject and description. Attached the qualification report. Revised the estimated firs
March 23, 2015.

The change described in this PCN does not alter Microchip's current regulatory con
the applicable products.

Attachment(s): PCN_JAON-03UTRS739_Qual_Report.pdf
PCN_JAON-03UTRS739_Affected CPN.pdf
PCN_JAON-03UTRS739_Affected CPN.xls

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QUALIFICATION REPORT
RELIABILITY LABORATORY

PCN #: JAON-03UTRS739

Date:
February 26, 2015

Qualification of palladium coated copper (PdCu) bond wire and 3280 die attach epoxy in selected products of the 120K and 121K wafer technologies available in 14L SOIC package at MTAI assembly site.

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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of palladium coated copper (PdCu) bond wire and 3280 die attach epoxy in selected products of the 120K and 121K wafer technologies available in 14L SOIC package at MTAI assembly site.
CN	BC142272
QUAL ID	Q14144-04
MP CODE	A7AZ54D3XA04
Part No.	PIC16C505-04E/SL
Bonding No.	A-054204 Rev. B
CCB No.	1155.38
Package	
Type	14L SOIC
Package size	150 mils
Die thickness	15 mils
Die size	76.90 x 94.10 mils
Lead Frame	
Paddle size	95 x 155 mils
Material	A194
Surface	Bare copper on paddle
Process	Stamp
Lead Lock	No
Part Number	10101411
Treatment	Brown Oxide Treatment
Die attach material	
Epoxy	3280
Wire	PdCu wire
Mold Compound	G600V
Plating Composition	Matte Tin

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PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MTAI154101564.000	TMPE215314231.300	1502VAQ

Result [X] Pass [ ] Fail [ ] ____________________

14L SOIC (.150”) 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.

Prepared By:____________________**Date:** February 26, 2015 **(Reliability Engineer)**

(Mr.Udom Suksansakul)

Approved By:____________________**Date:** February 26, 2015 **(Reliability Manager)**

(Mr. Somnuek Thongprasert)

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	45	0/45	Pass	
Precondition Prior Perform Reliability Tests (At MSL Level 1)	**Electrical Test :**+125°C System: J750	JESD22-A113	231(0)	231		Good Devices
	Bake 150°C, 24 hrs System: CHINEE			231		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			231		
	3x Convection-Reflow 265°C max			231		
	System: Vitronics Soltec MR1243					
	Electrical Test :+25°C and 125°C System: J750			0/231	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		77		Parts had been pre-conditioned at 260°C
	Electrical Test: + 125°C System: J750		77(0)	0/77	Pass	
	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		77		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: J750		77(0)	0/77	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
HAST	**Stress Condition:** (Standard) +130°C/85%RH, 96 hrs. **Bias Volt:** 5.5 Volts System: HAST 6000X	JESD22-A110		77		Parts had been pre-conditioned at 260°C
	Electrical Test:+25°C and 125°C System: J750		77(0)	0/77	Pass	
High Temperature Storage Life	**Stress Condition:** Bake 175°C, 504 hrs System: SHEL LAB	JESD22-A103		45		
	Electrical Test:+25°C and 125°C System: J750		45(0)	0/45	Pass	
Solderability Temp 215°C	**Steam Aging:** Temp 93°C,8Hrs System: SAS-3000 Solder Dipping: Solder Temp.215°C Solder material: SnPb Sn63,Pb37 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	JESD22B-102E	22 (0)	22 22 0/22	Pass	
Solderability Temp 245°C	**Steam Aging:** Temp 93°C,8Hrs System: SAS-3000 Solder Dipping:Solder Temp.245°C Solder material:Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	JESD22B-102E	22 (0)	22 22 0/22	Pass	
Cross section	Cross section Inspection 3 units / lot	-	3(0) Wires	0/3		
Bond Strength Data Assembly	Wire Pull (> 2.5 grams)	M2011	10 (0) Wires	0/10	Pass	
	Bond Shear (>15.00 grams)	JESD22-B116	10 (0) bonds	0/10	Pass	

PCN_JAON-03UTRS739
CATALOG_PART_NBR
HA1504-I/SL
HA1504T-I/SL
HCS370/SL
HCS370-I/SL
HCS370T/SL
HCS370T-I/SL
MCP2030A-I/SL
MCP2030AT-I/SL
MCP2030-I/SL
MCP2030T-I/SL
MCP2036-I/SL
MCP2036T-I/SL
MCP2120-I/SL
MCP2120T-I/SL
MCP25020-E/SL
MCP25020-I/SL
MCP25020T-E/SL
MCP25020T-I/SL
MCP25025-I/SL
MCP25025T-I/SL
MCP25050-E/SL
MCP25050-I/SL
MCP25050T-E/SL
MCP25050T-I/SL
MCP25055-I/SL
MCP25055T-I/SL
MCP3004-I/SL
MCP3004T-I/SL
MCP3204-BI/SL
MCP3204-CI/SL
MCP3204T-BI/SL
MCP3204T-CI/SL
MCP3302-BI/SL
MCP3302-CI/SL
MCP3302T-BI/SL
MCP3302T-CI/SL
MCP42010-E/SL
MCP42010-I/SL
MCP42010T-E/SL
MCP42010T-I/SL
MCP42050-E/SL
MCP42050-I/SL
MCP42050T-E/SL
MCP42050T-I/SL
MCP42100-E/SL

MCP42100-I/SL
MCP42100T-E/SL
MCP42100T-I/SL
MCP6004-E/SL
MCP6004-I/SL
MCP6004-I/SLB21
MCP6004T-E/SL
MCP6004T-I/SL
MCP6004T-I/SLB21
MCP6024-E/SL
MCP6024-I/SL
MCP6024T-E/SL
MCP6024T-I/SL
MCP6034-E/SL
MCP6034T-E/SL
MCP6034T-E/SLV01
MCP6044-E/SL
MCP6044-E/SLBAA
MCP6044-I/SL
MCP6044T-E/SL
MCP6044T-E/SLBAA
MCP6044T-I/SL
MCP604-E/SL
MCP604-I/SL
MCP604T-E/SL
MCP604T-I/SL
MCP6054-E/SL
MCP6054T-E/SL
MCP6064-E/SL
MCP6064T-E/SL
MCP6074-E/SL
MCP6074T-E/SL
MCP609-I/SL
MCP609T-I/SL
MCP6144-E/SL
MCP6144-I/SL
MCP6144T-E/SL
MCP6144T-I/SL
MCP619-I/SL
MCP619-I/SLB21
MCP619T-I/SL
MCP619T-I/SLB21
MCP6234-E/SL
MCP6234T-E/SL
MCP6244-E/SL
MCP6244T-E/SL
MCP6274-E/SL

MCP6274-E/SLB21
MCP6274T-E/SL
MCP6274T-E/SLB21
MCP6284-E/SL
MCP6284-E/SLDAA
MCP6284T-E/SL
MCP6284T-E/SLDAA
MCP6294-E/SL
MCP6294T-E/SL
MCP6404-E/SL
MCP6404-H/SL
MCP6404T-E/SL
MCP6404T-H/SL
MCP6409-H/SL
MCP6409T-H/SL
MCP6444-E/SL
MCP6444T-E/SL
MCP6544-E/SL
MCP6544-I/SL
MCP6544T-E/SL
MCP6544T-I/SL
MCP6549-E/SL
MCP6549-I/SL
MCP6549T-E/SL
MCP6549T-I/SL
MCP6G04-E/SL
MCP6G04T-E/SL
MCP6L04T-E/SL
MCP6L4T-E/SL
MCP6L74T-E/SL
MCP6L94T-E/SL
MCP6S26-I/SL
MCP6S26T-I/SL
PIC16C505-04/SL
PIC16C505-04/SL105
PIC16C505-04/SLC07
PIC16C505-04E/SL
PIC16C505-04I/SL
PIC16C505-20/SL
PIC16C505-20E/SL
PIC16C505-20I/SL
PIC16C505T-04/SL
PIC16C505T-04/SL094
PIC16C505T-04/SL098
PIC16C505T-04E/SL
PIC16C505T-04E/SL115
PIC16C505T-04I/SL

PIC16C505T-04I/SL060
PIC16C505T-04I/SL111
PIC16C505T-04I/SL135
PIC16C505T-04I/SL137
PIC16C505T-20/SL
PIC16C505T-20E/SL
PIC16C505T-20I/SL
PIC16LC505-04/SL
PIC16LC505-04I/SL
PIC16LC505T-04/SL
PIC16LC505T-04I/SL