Product Change Notification - IIRA-08SZRJ543

Date: 18 Aug 2014

Notification subject: CCB 1360.02 Initial Notice: Qualification of 100L TQFP (14x14x1mm) package with palladium coated copper (PdCu) bond wire at ASE assembly site.

Notification text:

PCN Status:
Final notification

Microchip Parts Affected:
See attachments of affected catalog part numbers (CPN) labeled as…
PCN_IIRA-08SZRJ543_Affected_CPN.xls
PCN_IIRA-08SZRJ543_Affected_CPN.pdf

Description of Change:
Qualification of 100L TQFP (14x14x1mm) package with palladium coated copper (PdCu) bond wire at ASE assembly site.

Impacts to Data Sheet:
None

Reason for Change:
To improve productivity

Change Implementation Status:
In Progress

Estimated First Ship Date:
August 31, 2014 (date code: 1435)

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

Markings to Distinguish Revised from Unrevised Devices:
Traceability code

Revision History:
January 15, 2014: Issued initial notification.
August 18, 2014: Issued final notification. Attached the qualification report. Revised the estimated first ship date from May 2, 2014 to August 31, 2014.

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_IIRA-08SZRJ543_Qual Report.pdf
PCN_IIRA-08SZRJ543_Affected CPN.pdf
PCN_IIRA-08SZRJ543_Affected CPN.xls

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

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PCN_IIRA-08SZRJ543
CATALOG_PART_NBR
DSPIC33EP128GM310-E/PF
DSPIC33EP128GM310-H/PF
DSPIC33EP128GM310-I/PF
DSPIC33EP128GM310T-I/PF
DSPIC33EP128GM710-E/PF
DSPIC33EP128GM710-H/PF
DSPIC33EP128GM710-I/PF
DSPIC33EP128GM710T-I/PF
DSPIC33EP256GM310-E/PF
DSPIC33EP256GM310-H/PF
DSPIC33EP256GM310-I/PF
DSPIC33EP256GM310T-I/PF
DSPIC33EP256GM710-E/PF
DSPIC33EP256GM710-H/PF
DSPIC33EP256GM710-I/PF
DSPIC33EP256GM710T-I/PF
DSPIC33EP256MU810-E/PF
DSPIC33EP256MU810-I/PF
DSPIC33EP256MU810T-E/PF
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PIC32MX795F512LT-80I/PF
PIC32MX795F512LT-80V/PF

QUALIFICATION REPORT
RELIABILITY LABORATORY

PCN#: IIRA-08SZRJ543

Date
July 21, 2014

Qualification of 100L TQFP (14x14x1mm) package with palladium coated copper (PdCu) bond wire at ASE assembly site.

Distribution

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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of 100L TQFP (14x14x1mm) package with palladium coated copper (PdCu) bond wire at ASE assembly site.
CN	BC132074
QUAL ID	Q14023
MP CODE	TDAA17E5XCF8
Part No.	PIC32MX575F256L-80I/PF
Bonding No.	BDM-000395 Rev. A
CCB No.	1360.02

Package

Type	100L TQFP
Package size	14x14x1 mm
Die thickness	11 mils
Die size	225.8 x 219.5 mils

Lead Frame

Paddle size	276 x 276 mils
Material	C7025
Surface	double ring Ag
Process	Stamped
Lead Lock	No
Part Number	A07756
Treatment	None

Die attach material

Epoxy	CRM-1076WA
Wire	PdCu wire
Mold Compound	G631H
Plating Composition	Matte Tin

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PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
ASE-144200053	TC03914262713.100	14034HY
ASE-144200054	TC03914262713.100	14034J0
ASE-144200055	TC03914262713.100	14034KD

Result [X] Pass [ ] Fail [ ] ____________________

100L TQFP (14x14x1 mm) assembled by ASE pass reliability test per QCI-39000.This package was qualified the Moisture/Reflow Sensitivity Classification Level 3 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

Prepared By: **Date:** July 21, 2014 **(Sr.Reliability Engineer)**

(Mr.Udom Suksansakul)

Approved By: **Date:** July 21, 2014 **(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 3)	30°C/ 60%RH Moisture Soak 192 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 3)	**Electrical Test :**+25°C,105°C and -40°C System: J750	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE			693		
	30°C/60%RH Moisture Soak 192 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max			693		
	System: Vitronics Soltec MR1243					
	Electrical Test :+25°C and 105°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:** -65°C to +150°C, 1000 Cycles System : TABAI ESPEC TSA-70H	JESD22-A104		231		Parts had been pre-conditioned at 260°C
	Electrical Test: + 105°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:** +130°C/85%RH, 192 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:** +130°C/85%RH, 192 hrs. **Bias Volt:** 2.0 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 260°C
	Electrical Test:+25°C and 105°C System: J750		231(0)	0/231	Pass	77 units / lot
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB	JESD22-A103		45		45 units
	Electrical Test :+25°C and 105°C System: J750		45(0)	0/45	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
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	
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	