

# Product Change Notification - IIRA-08MVZQ035

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**Date:** 25 Jul 2014

**Product Category:** 16-bit Microcontrollers and Digital Signal Controllers; SMSC; 8-bit Microcontrollers; 32-bit PIC Microcontrollers

**Notification subject:** CCB 1360.01 Final Notice: Qualification of ASE assembly site for 100L TQFP (14x14x1mm) package with gold (Au) wire.

**Notification text:**

**PCN Status:**

Final notification

**Microchip Parts Affected:**

See attachments of affected catalog part numbers (CPN) labeled as...

PCN\_IIRA-08MVZQ035\_Affected\_CPN.xls

PCN\_IIRA-08MVZQ035\_Affected\_CPN.pdf

**Description of Change:**

Qualification of ASE assembly site for 100L TQFP (14x14x1mm) package with gold (Au) wire.

**Note:**

This will be the 4<sup>th</sup> site qualified to assembly this package with gold wire.

**Impacts to Data Sheet:**

None

**Reason for Change:**

To improve productivity

**Change Implementation Status:**

Complete

**Estimated First Ship Date:**

August 15, 2014 (date code: 1433)

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.

**July 25, 2014:** Issued final notification. Attached the qualification report. Revised the estimated first ship date from May 18, 2014 to August 15, 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-08MVZQ035\\_Qual Report.pdf](#) [PCN\\_IIRA-08MVZQ035\\_Affected CPN.pdf](#) [PCN\\_IIRA-08MVZQ035\\_Affected CPN.xls](#)

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PCN_IIRA-08MVZQ035
CATALOG_PART_NBR
DSPIC33EP128GM310-E/PF
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**MICROCHIP**

**QUALIFICATION REPORT  
RELIABILITY LABORATORY**

**PCN #: IIRA-08MVZQ035**

**Date  
July 18, 2014**

**Qualification of ASE assembly site for 100L TQFP  
(14x14x1mm) package with gold (Au) wire**

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## MICROCHIP PACKAGE QUALIFICATION REPORT

**Purpose** Qualification of ASE assembly site for 100L TQFP (14x14x1mm) package with gold (Au) wire

**CN** BC132073

**QUAL ID** Q14029

**MP CODE** TDAA17E5XCF8

**Part No.** PIC32MX575F256L-80I/PF

**Bonding No.** BDM-000394 Rev. A

**CCB No.** 1360.01

### 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** Au Wire

**Mold Compound** EME-G631H

**Plating Composition** Matte Tin



# MICROCHIP PACKAGE QUALIFICATION REPORT

## Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
ASE-144200050	TC03914262713.100	14034HS
ASE-144200051	TC03914262713.100	14034HT
ASE-144200052	TC03914262713.100	14034HU

## Result

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 18, 2014 (Sr. Reliability Engineer)

(Mr. Udom Suksansakul)

Approved By:  Date: July 18, 2014 (Reliability Manager)

(Mr. Somnuek Thongprasert)

## PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
<b>Moisture/Reflow Sensitivity Classification Test (At MSL Level 3)</b>	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 C J-STD-020D	135	0/135	Pass	

<b><u>Precondition</u></b> <b><u>Prior Perform</u></b> <b><u>Reliability Tests</u></b> <b>(At MSL Level 3)</b>	<b>Electrical Test</b> :+25°C,105°C and -40°C System: J750	JESD22- A113	693(0)	693	Pass	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 System: Vitronics Soltec MR1243			693		
	<b>Electrical Test</b> :+25°C and 105°C System: J750			0/693		

# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>Temp Cycle</b>	<b>Stress Condition:</b> -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H	JESD22- A104		231		Parts had been pre-conditioned at 260°C  77 units / lot
	<b>Electrical Test:</b> + 105°C  System: J750		231(0)	0/231	Pass	
	<b>Bond Strength:</b> Wire Pull (> 2.5 grams) Bond Shear (13.00 grams)		15 (0)	0/15	Pass	
<b>UNBIASED-HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22- A118		231		Parts had been pre-conditioned at 260°C  77 units / lot
	<b>Electrical Test:</b> +25°C System: J750		231(0)	0/231	Pass	
<b>HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. <b>Bias Volt:</b> 2.0 Volts System: HAST 6000X	JESD22- A110		231		Parts had been pre-conditioned at 260°C  77 units / lot
	<b>Electrical Test:</b> +25°C and 105°C System: J750		231(0)	0/231	Pass	
<b>High Temperature Storage Life</b>	<b>Stress Condition:</b> Bake 175°C, 504 hrs System: SHEL LAB	JESD22- A103		45		45 units
	<b>Electrical Test</b> :+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
<b>Solderability</b> <b>Temp 245°C</b>	<b>Steam Aging:</b> 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	
<b>Bond Strength</b> <b>Data Assembly</b>	Wire Pull (> 2.5 grams)   Bond Shear (13.00 grams)	M2011   JESD22-B116	30 (0) Wires   30 (0) bonds	0/30   0/30	Pass   Pass	