

# Product Change Notification - IIRA-19HYJU812

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**Date:** 26 Dec 2013

**Notification subject:** CCB 1361.01 Initial Notification: Qualification of selected products available in the 28L SPDIP package with palladium coated copper (PdCu) bond wire at MMT (ALPH) assembly site.

**Notification text:** **PCN Status:**  
Initial notification

**Microchip Parts Affected:**

See attachments of affected catalog part numbers (CPN) labeled as...  
PCN\_IIRA-19HYJU812\_Affected\_CPN.xls  
PCN\_IIRA-19HYJU812\_Affected\_CPN.pdf

**Description of Change:**

Qualification of selected products available in the 28L SPDIP package with palladium coated copper (PdCu) bond wire at MMT (ALPH) assembly site.

NOTE: Selected products are non-automotive standalone analog and PIC MCU devices. Please review the affected CPN lists (attached) to identify the actual parts affected.

**Pre Change:**

Gold (Au) wire

**Post Change:**

Palladium coated copper (PdCu) bond wire

**Impacts to Data Sheet:**

None

**Reason for Change:**

To improve manufacturability

**Change Implementation Status:**

In progress

**Estimated First Ship Dates:**

March 30, 2014 (date code: 1413)

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:**

**December 26, 2013:** Issued initial notification.

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-19HYJU812\\_Affected CPN.pdf](#)  
[PCN\\_IIRA-19HYJU812\\_Qual Plan.pdf](#)  
[PCN\\_IIRA-19HYJU812\\_Affected CPN.xls](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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PCN_IIRA-19HYJU812
CATALOG_PART_NBR
DSPIC30F2012-20E/SP
DSPIC30F2012-20I/SP
DSPIC30F2012-30I/SP
DSPIC33FJ06GS102A-E/SP
DSPIC33FJ06GS102A-I/SP
DSPIC33FJ06GS202A-E/SP
DSPIC33FJ06GS202A-I/SP
DSPIC33FJ09GS302-E/SP
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DSPIC33FJ12MC202-I/SP
DSPIC33FJ16GP102-E/SP
DSPIC33FJ16GP102-H/SP
DSPIC33FJ16GP102-I/SP
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HA3089-I/SP
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MCP23017-E/SP
MCP23S17-E/SP
MCV28A-I/SP
PIC14000-04/SP
PIC14000-04I/SP
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PIC16C55A-04/SP
PIC16C55A-04I/SP
PIC16C55A-20/SP
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PIC24FJ64GA102-I/SP
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PIC24HJ32GP202-E/SP
PIC24HJ32GP202-I/SP



**MICROCHIP**

# **QUALIFICATION PLAN**

**PCN #: IIRA-19HYJU812**

**Date:  
Dec 18, 2013**

**Qualification of selected products available in the 28L  
SPDIP package with palladium coated copper (PdCu)  
bond wire at MMT (ALPH) assembly site.**

Distribution

Surasit P.  
Mitchell R.  
Wichai K.  
Arnel M.

Rangsun K.  
F. Chen  
S. Melby  
Chaweng W.

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Fax (6638) 857149-50

**Purpose:** \_\_\_\_\_ Qualification of selected products available in the 28L SPDIP package with palladium coated copper (PdCu) bond wire at MMT (ALPH) assembly site.

**MP code:** \_\_\_\_\_ A5AF14M3XE04

**Part No.:** \_\_\_\_\_ PIC16F876-04E/SP

**BD No:** \_\_\_\_\_ BDM-000418 rev.A

**CCB No:** \_\_\_\_\_ 1361.01

**Package:**

**Type** \_\_\_\_\_ 28L SPDIP

**Width or Size** \_\_\_\_\_ 300 mils

**Die thickness:** \_\_\_\_\_ 15 mils

**Die size:** \_\_\_\_\_ 179.20 x 199.60 mils

**Lead frame:**

**Paddle size:** \_\_\_\_\_ 196 x 300 mils (Samsung–Korea)

**Material** \_\_\_\_\_ C194

**Surface** \_\_\_\_\_ Ring Ag on Paddle

**Process** \_\_\_\_\_ Stamped

**Lead Lock** \_\_\_\_\_ No

**Part Number** \_\_\_\_\_ TBD

**Treatment** \_\_\_\_\_ None

**Wire:**

**Material** \_\_\_\_\_ PdCu (Nippon-Japan)

**Die Attach Epoxy:**

**Part Number** \_\_\_\_\_ CRM-1064L (Sumitomo-Singapore)

**Conductive** \_\_\_\_\_ Yes

**Mold Compound:** \_\_\_\_\_ GE800 (Hitachi-Malaysia)

**Reliability Test plan:** \_\_\_\_\_ See attached, STD Package Reliability Test plan on each package.

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Special Instructions
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5	30 bonds from a minimum of 5 devices.
Wire Sweep		5	1	3	15			Required for any reduction in wire bond thickness.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	
HTSL (High Temp Storage Life)	+175 C for 504 hours or 150°C for 1008 hrs. Electrical test pre and post stress at +25C and hot temp.	45	5	1	50	0	10	Must be in progress at time of package release to production, but completion is not required for release to production. For hot temp testing, pre/post test 1 lot at 85°C and 125°C (if applicable).
HAST	+130°C/85% RH for 96 hours. Electrical test pre and post stress at +25°C and hot temp.	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning. For hot temp testing, pre/post test 1 lot at 85°C and 125°C (if applicable).
Unbiased HAST	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at +25°C.	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	-65°C to +150°C for 500 cycles. Electrical test pre and post stress at hot temp; 3 gram force WBP, on 5 devices from 1 lot, Test by following readpoint TC50,TC250 and TC 500.	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning. For hot temp testing, pre/post test 1 lot at 85°C and 125°C (if applicable).