

## Product Change Notification - JAON-16ISFI346

**Date:** 18 Feb 2015

**Notification subject:** CCB 1155.37 Initial Notice: Qualification of palladium coated copper (PdCu) bond wire and 3280 die attach epoxy in selected products of the 90K, 120K and 121K wafer technologies available in 18L SOIC.

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

**Microchip Parts Affected:**  
See attachments of affected catalog part numbers (CPN) labeled as...  
PCN\_JAON-16ISFI346\_Affected\_CPN.xls  
PCN\_JAON-16ISFI346\_Affected\_CPN.pdf

**Description of Change:**  
Qualification of palladium coated copper (PdCu) bond wire and 3280 die attach epoxy in selected products of the 90K, 120K and 121K wafer technologies available in 18L SOIC package at MTAI assembly site.

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

**Pre Change:**  
Gold wire and 8390A die attach epoxy

**Post Change:**  
PdCu wire and 3280 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:**  
May 27, 2015 (date code: 1522)

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:**  
**February 18, 2015:** 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\\_JAON-16ISFI346\\_Qual\\_Plan.pdf](#)  
[PCN\\_JAON-16ISFI346\\_Affected\\_CPN.pdf](#)  
[PCN\\_JAON-16ISFI346\\_Affected\\_CPN.xls](#)

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## **QUALIFICATION PLAN**

**PCN #: JAON-16ISFI346**

**Date:  
February 11, 2015**

**Qualification of palladium coated copper (PdCu) bond wire and 3280 die attach epoxy in selected products of the 90K, 120K and 121K wafer technologies available in 18L SOIC package at MTAI assembly site.**

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**Purpose:** \_\_\_\_\_ Qualification of palladium coated copper (PdCu) bond wire and 3280 die attach epoxy in selected products of the 90K, 120K and 121K wafer technologies available in 18L SOIC package at MTAI assembly site.

**Mask:** \_\_\_\_\_ A7AB2

**Part Number:** \_\_\_\_\_ PIC16C621A

**Die Size:** \_\_\_\_\_ 108.4x82.3

**Bonding Diagram No.:** \_\_\_\_\_ BDM-000639/A

**CCB No.:** \_\_\_\_\_ 1155.37

**Package:**

**Type** \_\_\_\_\_ 18L SOIC

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

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

**Die size:** \_\_\_\_\_ see above table

**Lead frame:**

**Paddle size:** \_\_\_\_\_ 120 x 120 mils

**Material** \_\_\_\_\_ A194

**Surface** \_\_\_\_\_ Bare copper on paddle

**Process** \_\_\_\_\_ Stamp

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

**Part Number** \_\_\_\_\_ 10101815

**Treatment** \_\_\_\_\_ Brown Oxide Treatment

**Wire:**

**Material** \_\_\_\_\_ PdCu

**Die Attach Epoxy:**

**Part Number** \_\_\_\_\_ 3280

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

**Mold Compound:** \_\_\_\_\_ G600V

**Lead finish** \_\_\_\_\_ Matte tin

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.
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.
Preconditioning - Required for surface mount devices	+150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020D for package type; Electrical test pre and post stress at +25°C. Perform SAM analysis using the standard sample size. MSL-1 @ 260°C	231	15	4	984	0	15	Spares should be properly identified. 77 parts from each lot to be used for HAST, Autoclave, Temp Cycle test.
HAST	+130°C/85% RH for 96 hours. Electrical test pre and post stress at +25°C and hot temp. 1 lot tested at 125C	77	5	4	328	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Unbiased HAST	+130°C/85% RH for 96 hrs	77	5	4	328	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 following Temp Cycle stress. 1 lot tested at 125C	77	5	4	328	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

PCN_JAON-16ISFI346
CATALOG_PART_NBR
CF745-04/SO
HS10-100S0S/10SS25
MCP2140-I/SO
MCP2140-I/SORVB
MCP2140T-I/SO
MCP2140T-I/SORVB
MCP2150-I/SO
MCP2150-I/SORVB
MCP2150-I/SORVC
MCP2150T-I/SO
MCP2150T-I/SORVB
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MCP2155-I/SORVC
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MCP2510-E/SO
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MCP2510T-E/SO
MCP2510T-I/SO
PIC16C54A-04/SO
PIC16C54A-04E/SO
PIC16C54A-04I/SO
PIC16C54A-10/SO
PIC16C54A-10E/SO
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PIC16C54A-20/SO
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PIC16C54AT-04/SO
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