

Product Change Notification - JAON-09VRYL655

Date: 17 Dec 2014

Product Category: Analog (Linear & Mixed Signal) AND Interface; 8-bit Microcontrollers; Analog (Thermal, Power Management & Safety)

Notification subject: CCB 1155.35 Initial Notice: Qualification of palladium coated copper (PdCu) bond wire and 3280 die attach epoxy in selected products of the 150K and 160K wafer technologies available in 28L SSOP

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

Microchip Parts Affected:

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

PCN_JAON-09VRYL655_Affected_CPN.xls

PCN_JAON-09VRYL655_Affected_CPN.pdf

Description of Change:

Qualification of palladium coated copper (PdCu) bond wire and 3280 die attach epoxy in selected products of the 150K and 160K wafer technologies available in 28L SSOP 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:

January 23, 2015 (date code: 1504)

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 17, 2014: 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-09VRYL655_Qual_Plan.pdf](#) [PCN_JAON-09VRYL655_Affected_CPN.pdf](#) [PCN_JAON-09VRYL655_Affected_CPN.xls](#)

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MICROCHIP

QUALIFICATION PLAN

PCN #: JAON-09VRYL655

**Date:
Dec 3, 2014**

**Qualification of palladium coated copper (PdCu) bond wire
and 3280 die attach epoxy in selected products of the 150K
and 160K wafer technologies available in 28L SSOP 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 150K and 160K wafer technologies available in 28L SSOP package at MTAI assembly site.

Mask: _____ DECU2

Part Number: _____ PIC16F883

Die Size _____ 101.5x96.3

Bonding Diagram#: _____ BDM-000635/A

CCB No.: _____ 1155.35

Package:

Type _____ 28L SSOP

Width or Size _____ 209 mils

Die thickness: _____ 15 mils

Die size: _____ see above table

Lead frame:

Paddle size: _____ 153 x 200

Material _____ A194

Surface _____ Bare copper on paddle

Process _____ Etch

Lead Lock _____ Yes

Part Number _____ 10102834

Treatment _____ Brown Oxide Treatment

Wire:

Material _____ PdCu

Die Attach Epoxy:

Part Number _____ 3280

Conductive _____ Yes

Mold Compound: _____ G600

Lead finish _____ Matte tin

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.
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. 1 lot tested at 85C	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. Extend to 192 hrs. 1 lot tested at 85C	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 Extend to 192 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. Extend to 1000 cycles 1 lot tested at 85C	77	5	4	328	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

PCN_JAON-09VRYL655
CATALOG_PART_NBR
HA1930-I/SS
HA1930T-I/SS
HA2030-I/SS
HA2030T-I/SS
HA4314-I/SS021
HA4315T-I/SS
HA4315T-I/SS022
MCP23016-I/SS
MCP23016T-I/SS
MCP23017-E/SS
MCP23017T-E/SS
MCP23S17-E/SS
MCP23S17T-E/SS
PIC16F570-E/SS
PIC16F570-I/SS
PIC16F570T-I/SS
PIC16F57-E/SS
PIC16F57-I/SS
PIC16F57T-E/SS
PIC16F57T-I/SS
PIC16F57T-I/SS024
PIC16F57T-I/SS025
PIC16F57T-I/SS027
PIC16F72-E/SS
PIC16F72-I/SS
PIC16F72-I/SSG
PIC16F72T-E/SS
PIC16F72T-I/SS
PIC16F737-I/SS
PIC16F737T-I/SS
PIC16F73-E/SS
PIC16F73-I/SS
PIC16F73T-E/SS
PIC16F73T-I/SS
PIC16F73T-I/SS059
PIC16F73T-I/SS155
PIC16F73T-I/SSC15
PIC16F767-E/SS
PIC16F767-I/SS
PIC16F767T-I/SS
PIC16F76-E/SS
PIC16F76-I/SS
PIC16F76-I/SS098
PIC16F76T-E/SS
PIC16F76T-I/SS
PIC16F873A-E/SS
PIC16F873A-I/SS
PIC16F873AT-I/SS

PIC16F876A-E/SS
PIC16F876A-I/SS
PIC16F876A-I/SSG
PIC16F876AT-E/SS
PIC16F876AT-I/SS
PIC16F876AT-I/SSC36
PIC16F876AT-I/SSG
PIC16F882-E/SS
PIC16F882-I/SS
PIC16F882T-E/SS
PIC16F882T-I/SS
PIC16F882T-I/SS026
PIC16F882T-I/SS029
PIC16F883-E/SS
PIC16F883-I/SS
PIC16F883-I/SS021
PIC16F883-I/SS023
PIC16F883-I/SS032
PIC16F883-I/SS035
PIC16F883-I/SS037
PIC16F883-I/SS038
PIC16F883-I/SS045
PIC16F883-I/SS046
PIC16F883-I/SS062
PIC16F883-I/SS063
PIC16F883-I/SS064
PIC16F883-I/SSC02
PIC16F883T-E/SS
PIC16F883T-I/SS
PIC16F883T-I/SS022
PIC16F883T-I/SS032
PIC16F883T-I/SS062
PIC16F883T-I/SS063
PIC16F883T-I/SS064
PIC16F883T-I/SS070
PIC16F883T-I/SSC02
PIC16F886-E/SS
PIC16F886-I/SS
PIC16F886T-E/SS
PIC16F886T-I/SS
PIC16F886T-I/SS026
PIC16F886T-I/SS052
PIC16F913-E/SS
PIC16F913-I/SS
PIC16F913T-E/SS
PIC16F913T-I/SS
PIC16F913T-I/SS025
PIC16F913T-I/SS027
PIC16F913T-I/SS032
PIC16F916-E/SS

PIC16F916-I/SS
PIC16F916-I/SS034
PIC16F916-I/SS035
PIC16F916T-I/SS
PIC16F916T-I/SS028
PIC16F916T-I/SS029
PIC16F916T-I/SS031
PIC16F916T-I/SS033
PIC16F916T-I/SS034
PIC16F916T-I/SS035
PIC16LF72-I/SS
PIC16LF72T-I/SS
PIC16LF737-I/SS
PIC16LF737T-I/SS
PIC16LF73-I/SS
PIC16LF73T-I/SS
PIC16LF767-I/SS
PIC16LF767T-I/SS
PIC16LF76-I/SS
PIC16LF76T-I/SS
PIC16LF873A-I/SS
PIC16LF873AT-I/SS
PIC16LF876A-I/SS
PIC16LF876AT-I/SS
PIC16LF876AT-I/SSC26
PIC18F2221-E/SS
PIC18F2221-I/SS
PIC18F2221T-I/SS
PIC18F2321-E/SS
PIC18F2321-I/SS
PIC18F2321T-E/SS
PIC18LF2221-I/SS
PIC18LF2221T-I/SS
PIC18LF2321-I/SS
PIC18LF2321T-I/SS
PS501-I/SSC05
PS501T-I/SSC01
PS501T-I/SSC05