

# Product Change Notification - JAON-27WIZT300

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**Date:** 18 Aug 2014

**Notification subject:** CCB 1444.01 Initial Notice: Qualification of palladium coated copper (PdCu) bond wire in selected products of the 90K, 120K, and 121K technologies available in 8L SOIC package at MMT assembly site

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

**Microchip Parts Affected:**

See attachments of affected catalog part numbers (CPN) labeled as...  
[PCN\\_JAON-27WIZT300\\_Affected\\_CPN.xls](#)  
[PCN\\_JAON-27WIZT300\\_Affected\\_CPN.pdf](#)

**Description of Change:**

Qualification of palladium coated copper (PdCu) bond wire in selected products of the 90K, 120K, and 121K technologies available in 8L SOIC package at MMT assembly site.

**Impacts to Data Sheet:**

None

**Reason for Change:**

To improve manufacturability and qualify PdCu wire at MMT assembly site.

**Change Implementation Status:**

In Progress

**Estimated First Ship Date:**

November 10, 2014 (date code: 1446)

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:**

**August 18, 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-27WIZT300\\_Qual Plan.pdf](#)  
[PCN\\_JAON-27WIZT300\\_Affected\\_CPN.pdf](#)  
[PCN\\_JAON-27WIZT300\\_Affected\\_CPN.xls](#)

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

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PCN_JAON-27WIZT300
CATALOG_PART_NBR
24AA02/SNRVC
24AA02-I/SNRVC
24AA02T/SNRVC
24AA02T-I/SNRVC
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24LC02BT/SNROCRVC
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PIC12LC509AT-04I/SN126
PIC12LC509AT-04I/SNG063



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## **QUALIFICATION PLAN**

**PCN #: JAON-27WIZT300**

**Jul 23, 2014**

**Qualification of palladium coated copper (PdCu) bond wire at MMT assembly site for 120K wafer technology in 8L SOIC package. The 90K and 121K wafer technologies will qualify by similarity.**

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**Purpose:** \_\_\_\_\_ Qualification of palladium coated copper (PdCu) bond wire at MMT assembly site for 120K wafer technology in 8L SOIC package. The 90K and 121K wafer technologies will qualify by similarity.

**MP code:** \_\_\_\_\_ ABBS14C2XA00

**Part No.:** \_\_\_\_\_ MCP6402-E/SN

**BD No.:** \_\_\_\_\_ BDM-000536 rev.A (Engineering BD)

**CCB No.:** \_\_\_\_\_ 1444.01

**Package:**

**Type** \_\_\_\_\_ 8L SOIC

**Width or Size** \_\_\_\_\_ 150 mils

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

**Die size:** \_\_\_\_\_ 52.9 x 34.7 mils

**Lead frame:**

**Paddle size:** \_\_\_\_\_ 90 x 90 mils

**Material** \_\_\_\_\_ CDA194

**Surface** \_\_\_\_\_ Bare Cu

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

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

**Part Number** \_\_\_\_\_ 10100812

**Treatment** \_\_\_\_\_ BOT

**Wire:**

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

**Die Attach Epoxy:**

**Part Number** \_\_\_\_\_ 8390A

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

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

**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		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. (1 lot to be tested at 85 and 125C)	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)
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. MSL1 260C	231	15	3	738	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 HAST to 192 hrs post stress test at 25C (1 lot to be tested at 85 and 125C)	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning. Please decap/ inspect 5 units for anomalies. 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. Extend uHAST to 192hrs. Post stress test at 25C	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning. Please decap/ inspect 5 units for anomalies.



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
Temp Cycle	<p>-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. Extend temp cycle to 1000 cycle post stress test at 25C</p> <p>(1 lot to be tested at 85 and 125C)</p>	77	5	3	246	0	15	<p>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). Please decap/ inspect 5 units for anomalies.</p>