

Product Change Notification - JAON-15ERIE320

Date: 21 Sep 2015

Product Category:

Notification subject: CCB 1744 Final Notice: Qualification of PdCu bond wire in selected products of the 40K, 42K, 57K, 77K (SLM) and 77K (DLM) wafer technologies in 28L SPDIP and 8L, 14L and 18L PDIP package at MMT site.

Notification text: **PCN Status:**
Final notification

Microchip Parts Affected:

Please open the attachments found in the attachments field below labeled as PCN_#_Affected_CPN.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

Description of Change:

Qualification of palladium coated copper (PdCu) bond wire in selected products of the 40K, 42K, 57K, 77K (SLM) and 77K (DLM) wafer technologies available in 28L SPDIP and 8L, 14L

and 18L PDIP package at MMT assembly site.

Pre Change:

Gold (Au) bond wire

Post Change:

Palladium coated copper (PdCu) bond wire

Impacts to Data Sheet:

None

Reason for Change:

To improve manufacturability by qualifying palladium coated copper (PdCu) bond wire at MMT assembly site.

Change Implementation Status:

In Progress

Estimated First Ship Date:

October 30, 2015 (date code: 1544)

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:

September 21, 2015: Issued initial notification.

The change described in this P_{CN} does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachment(s):

[PCN_JAON-15ERIE320_Qual_Report.pdf](#) [PCN_JAON-15ERIE320_Affected_CPN.pdf](#) [PCN_JAON-15ERIE320_Affected_CPN.xls](#)

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| PCN_JAON-15ERIE320 |
|--------------------|
| CATALOG_PART_NBR |
| 24AA00/P |
| 24AA00-I/P |
| 24C00/P |
| 24C00-E/P |
| 24C00-I/P |
| 24LC00/P |
| 24LC00-I/P |
| 24LC21/P |
| 24LC21A/P |
| 24LC21A-I/P |
| 24LC21-I/P |
| 24LC22A-I/P |
| 24LCS21A/P |
| 24LCS21A-I/P |
| 24LCS22A-I/P |
| 25AA040/P |
| 25AA040-I/P |
| 25AA080/P |
| 25AA080-I/P |
| 25AA160/P |
| 25AA160-I/P |
| 25C040/P |
| 25C040-E/P |
| 25C040-I/P |
| 25C080/P |
| 25C080-E/P |
| 25C080-I/P |
| 25C160/P |
| 25C160-E/P |
| 25C160-I/P |
| 25LC040/P |
| 25LC040-I/P |
| 25LC080/P |
| 25LC080-I/P |
| 25LC160/P |
| 25LC160-I/P |
| 93AA46/P |
| 93AA56/P |
| 93AA56-I/P |
| 93AA66/P |
| 93AA66-I/P |
| 93AA76/P |
| 93AA86/P |
| 93C46B/PROCRVA |
| 93C46B/PRVA |

| |
|-------------------|
| 93C46B-E/PRVA |
| 93C46B-I/PRVA |
| 93C56-E/P |
| 93C66B-E/PRVA |
| 93C66-E/P |
| 93C76-E/P |
| 93C86-E/P |
| 93LC46/P |
| 93LC46A/PRVA |
| 93LC46A-I/PROCRVA |
| 93LC46B/PRVA |
| 93LC46B-I/PROCRVA |
| 93LC46B-I/PRVA |
| 93LC46-I/P |
| 93LC56/P |
| 93LC56A/PRVA |
| 93LC56A-I/PRVA |
| 93LC56B/PRVA |
| 93LC56B-I/PRVA |
| 93LC56-I/P |
| 93LC66/P |
| 93LC66A/PRVA |
| 93LC66A-I/PRVA |
| 93LC66B/PROCRVA |
| 93LC66B/PRVA |
| 93LC66B-I/PROCRVA |
| 93LC66B-I/PRVA |
| 93LC66-I/P |
| 93LC76/P |
| 93LC76-I/P |
| 93LC86/P |
| 93LC86-I/P |
| CF775-04/SP |
| HCS200/P |
| HCS200-I/P |
| HCS300/P |
| HCS300-I/P |
| HCS301/P |
| HCS301-I/P |
| HCS320/P |
| HCS320-I/P |
| HCS360/P |
| HCS360-I/P |
| HCS360-I/P036 |
| HCS361/P |
| HCS361-I/P |
| HCS362-I/P |

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|-------------------|
| HCS410/P |
| HCS410-I/P |
| HCS512/P |
| HCS512-I/P |
| MCP1403-E/P |
| MCP1404-E/P |
| MCP1405-E/P |
| MCP1406-E/P |
| MCP1407-E/P |
| MCP14E10-E/P |
| MCP14E11-E/P |
| MCP14E3-E/P |
| MCP14E4-E/P |
| MCP14E5-E/P |
| MCP14E6-E/P |
| MCP14E7-E/P |
| MCP14E8-E/P |
| MCP14E9-E/P |
| PIC16C54-10/P |
| PIC16C54-10I/P |
| PIC16C54-HS/P |
| PIC16C54-HSE/P |
| PIC16C54-HSI/P |
| PIC16C54-LP/P |
| PIC16C54-LPE/P |
| PIC16C54-LPI/P |
| PIC16C54-RC/P |
| PIC16C54-RCE/P |
| PIC16C54-RCI/P |
| PIC16C54-RCI/P028 |
| PIC16C54-RCI/P029 |
| PIC16C54-XT/P |
| PIC16C54-XTI/P |
| PIC16C55-10/P |
| PIC16C55-10/SP |
| PIC16C55-10I/P |
| PIC16C55-10I/SP |
| PIC16C55-HS/P |
| PIC16C55-HS/SP |
| PIC16C55-HSI/P |
| PIC16C55-HSI/SP |
| PIC16C55-LP/P |
| PIC16C55-LP/SP |
| PIC16C55-LPI/P |
| PIC16C55-LPI/SP |
| PIC16C55-RC/P |
| PIC16C55-RC/SP |

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|-------------------|
| PIC16C55-RCI/P |
| PIC16C55-RCI/SP |
| PIC16C55-XT/P |
| PIC16C55-XT/SP |
| PIC16C55-XTE/SP |
| PIC16C55-XTI/P |
| PIC16C55-XTI/SP |
| PIC16C56-10/P |
| PIC16C56-10I/P |
| PIC16C56-HS/P |
| PIC16C56-HSI/P |
| PIC16C56-LP/P |
| PIC16C56-LPE/P |
| PIC16C56-LPI/P |
| PIC16C56-RC/P |
| PIC16C56-RCI/P |
| PIC16C56-RCI/P045 |
| PIC16C56-XT/P |
| PIC16C56-XTI/P |
| PIC16C57-10/P |
| PIC16C57-10/SP |
| PIC16C57-10I/P |
| PIC16C57-10I/SP |
| PIC16C57-HS/P |
| PIC16C57-HS/SP |
| PIC16C57-HSE/P |
| PIC16C57-HSI/P |
| PIC16C57-HSI/SP |
| PIC16C57-LP/P |
| PIC16C57-LP/SP |
| PIC16C57-LPI/P |
| PIC16C57-LPI/SP |
| PIC16C57-RC/P |
| PIC16C57-RC/SP |
| PIC16C57-RCE/P |
| PIC16C57-RCE/SP |
| PIC16C57-RCI/P |
| PIC16C57-RCI/P175 |
| PIC16C57-RCI/SP |
| PIC16C57-XT/P |
| PIC16C57-XT/SP |
| PIC16C57-XTE/P |
| PIC16C57-XTE/SP |
| PIC16C57-XTI/P |
| PIC16C57-XTI/SP |
| PIC16C71-04/P |
| PIC16C71-04I/P |

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|---------------------|
| PIC16C71-04I/P037 |
| PIC16C71-20/P |
| PIC16C71-20I/P |
| PIC16C71-ME/P |
| PIC16F83-04/P |
| PIC16F83-10/P |
| PIC16F84-04/P |
| PIC16F84-04I/P |
| PIC16F84-10/P |
| PIC16F84-10I/P |
| PIC16HV540-04/P |
| PIC16HV540-04I/P |
| PIC16HV540-04I/P027 |
| PIC16HV540-04I/P028 |
| PIC16HV540-04I/P029 |
| PIC16HV540-20/P |
| PIC16HV540-20I/P |
| PIC16LC71-04/P |
| PIC16LC71-04I/P |
| PIC16LF83-04I/P |
| PIC16LF84-04/P |
| PIC16LF84-04I/P |
| TC1044SCPA |
| TC1044SEPA |
| TC1232CPA |
| TC1232EPA |
| TC1410CPA |
| TC1410EPA |
| TC1410NCPA |
| TC1410NEPA |
| TC1411CPA |
| TC1411EPA |
| TC1411NCPA |
| TC1411NEPA |
| TC1411NVPA |
| TC1411VPA |
| TC1412CPA |
| TC1412EPA |
| TC1412NCPA |
| TC1412NEPA |
| TC1413CPA |
| TC1413EPA |
| TC1413NCPA |
| TC1413NEPA |
| TC1426CPA |
| TC1427CPA |
| TC1427EPA |

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| TC1427VPA |
| TC1428CPA |
| TC1428VPA |
| TC426CPA |
| TC426EPA |
| TC427CPA |
| TC427EPA |
| TC427VPA |
| TC428CPA |
| TC428CPAROC |
| TC428EPA |
| TC429CPA |
| TC429EPA |
| TC4403CPA |
| TC4403EPA |
| TC4404CPA |
| TC4404EPA |
| TC4405CPA |
| TC4405EPA |
| TC4420CPA |
| TC4420EPA |
| TC4420VPA |
| TC4421AVPA |
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| TC4425VPA |
| TC4426ACPA |
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| TC4426AVPA |
| TC4426CPA |
| TC4426EPA |

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| TC4426VPA |
| TC4427ACPA |
| TC4427ACPAAAA |
| TC4427AEPA |
| TC4427AVPA |
| TC4427CPA |
| TC4427EPA |
| TC4427VPA |
| TC4428ACPA |
| TC4428AEPA |
| TC4428AVPA |
| TC4428CPA |
| TC4428EPA |
| TC4428VPA |
| TC4429CPA |
| TC4429EPA |
| TC4429VPA |
| TC4431CPA |
| TC4431EPA |
| TC4431VPA |
| TC4432CPA |
| TC4432EPA |
| TC4432VPA |
| TC4451VPA |
| TC4452VPA |
| TC4467CPD |
| TC4467EPD |
| TC4468CPD |
| TC4468EPD |
| TC4469CPD |
| TC4469EPD |
| TC4626CPA |
| TC4626EPA |
| TC4627CPA |
| TC4627EPA |
| TC514CPJ |
| TC520ACPD |
| TC620CCPA |
| TC620CEPA |
| TC620HCPA |
| TC620HEPA |
| TC621CCPA |
| TC621CEPA |
| TC621HCPA |
| TC621HEPA |
| TC622CPA |
| TC622EPA |

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| TC622VPA |
| TC623CCPA |
| TC623CEPA |
| TC624CPA |
| TC624EPA |
| TC624VPA |
| TC682CPA |
| TC682EPA |
| TC7106ACPL |
| TC7106AIPL |
| TC7106CPL |
| TC7106IPL |
| TC7107ACPL |
| TC7107AIPL |
| TC7107CPL |
| TC7107IPL |
| TC7109ACPL |
| TC7109ACPL514 |
| TC7109CPL |
| TC7116ACPL |
| TC7116CPL |
| TC7117ACPL |
| TC7117CPL |
| TC7126ACPL |
| TC7126CPL |
| TC7126IPL |
| TC7129CPL |
| TC7650CPA |
| TC7650CPD |
| TC7652CPA |
| TC7652CPD |
| TC7660CPA |
| TC7660EPA |
| TC7660HCPA |
| TC7660HEPA |
| TC7660SCPA |
| TC7660SEPA |
| TC7662ACPA |
| TC7662AEPA |
| TC7662BCPA |
| TC7662BEPA |
| TC850CPL |
| TC913ACPA |
| TC913BCPA |
| TC9400CPD |
| TC9401CPD |
| TC9402CPD |

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| TC962CPA |
| TC962EPA |



MICROCHIP

**QUALIFICATION REPORT
RELIABILITY LABORATORY**

PCN #: JAON-15ERIE320

**Date:
March 6, 2014**

Qualification of palladium coated copper (PdCu) bond wire in selected products of the 40K, 42K, 57K, 77K (SLM) and 77K (DLM) wafer technologies available in 28L SPDIP and 8L, 14L and 18L PDIP package at MMT assembly site

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PACKAGE QUALIFICATION REPORT

Purpose Qualification of palladium coated copper (PdCu) bond wire in selected products of the 40K, 42K, 57K, 77K (SLM) and 77K (DLM) wafer technologies available in 28L SPDIP and 8L, 14L and 18L PDIP package at MMT assembly site

CN BC132031
QUAL ID Q14001
MP CODE A5AF14M3XE04
Part No. PIC16F876-04E/SP
Bonding No. BDM-000418 Rev. A
CCB No. 1361.01 / 1744

Package

Type 28L SPDIP
Package size 300 mils
Die thickness 15 mils
Die size 179.20 x 199.60 mils

Lead Frame

Paddle size 196 x 300 mils
Material C194
Surface Ring Ag on paddle
Process Stamped
Lead Lock No
Part Number 10102812
Treatment None

Die attach material

Epoxy CRM-1064L
Wire PdCu wire
Mold Compound GE800
Plating Composition Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT


Manufacturing Information

| Assembly Lot No. | Wafer Lot No. | Date Code |
|------------------|-------------------|-----------|
| ALPH143600398 | TMPE214285700.000 | 134916R |
| ALPH143600399 | TMPE214285700.000 | 134916W |
| ALPH143700054 | TMPE214285700.000 | 1350171 |

Result

Pass Fail _____

28L SPDIP (.300") assembled by MMT (ALPH) pass reliability test per QCI-39000.

Prepared By:  Date: March 06, 2014 (Sr. Reliability Engineer)

(Mr. Udom Suksansakul)

Approved By:  Date: March 06, 2014 (Reliability Manager)

(Mr. Somnuek Thongprasert)

PACKAGE QUALIFICATION REPORT

| Test Number (Reference) | Test Condition | Standard/ Method | Qty. (Acc.) | Def/SS. | Result | Remarks |
|----------------------------|---|---------------------|----------------|---------|--------|---|
| Electrical Test | Electrical Test: +85°C and 125°C System: J750 | JESD22- A113 | 693(0) | 693 | | Good Devices |
| Temp Cycle | Stress Condition: (Standard) -65°C to +150°C, 50, 250, 500 Cycles System : TABAI ESPEC TSA-70H Electrical Test: + 85°C and 125°C System: J750 Bond Strength: Wire Pull (> 2.5 grams) Bond Shear (15.00 grams) | JESD22- A104 | 231(0) | 0/231 | Pass | Parts had been pre-conditioned at 260°C |
| | | | 15 (0) | 0/15 | Pass | |
| | | | 15 (0) | 0/15 | Pass | |
| UNBIASED-HAST | Stress Condition: (Standard) +130°C/85%RH, 96 hrs. System: HAST 6000X Electrical Test: +25°C System: J750 | JESD22- A118 | 231(0) | 0/231 | Pass | Parts had been pre-conditioned at 260°C |
| HAST | Stress Condition: (Standard) +130°C/85%RH, 96 hrs. Bias Volt: 5.5 Volts System: HAST 6000X Electrical Test: + 25°C,85°C and 125°C System: J750 | JESD22- A110 | 231(0) | 0/231 | Pass | Parts had been pre-conditioned at 260°C |

PACKAGE QUALIFICATION REPORT

| Test Number (Reference) | Test Condition | Standard/ Method | Qty. (Acc.) | Def/SS. | Result | Remarks |
|--|---|---------------------|-----------------|---------|--------|----------|
| High Temperature Storage Life | Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB | JESD22- A103 | | 45 | | 45 units |
| | Electrical Test: +25°C,85°C and 125°C System: J750 | | 45(0) | 0/45 | Pass | |
| Bond Strength Data Assembly | Wire Pull (> 2.5 grams) | JESD22- B116 | 30 (0) Wires | 0/30 | Pass | |
| | Bond Shear (15.00 grams) | | 30 (0) bonds | 0/30 | Pass | |