Product Change Notification - JAON-15ERIE320

Date: 30 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 final 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-15ERIE320_Qual Report.pdf PCN_JAON-15ERIE320_Affected_CPN.pdf PCN_JAON-15ERIE320_Affected_CPN.xls

Please contact your local Microchip sales office with questions or concerns regarding this notification.

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Affected Catalog Part Numbers (CPN)

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

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Affected Catalog Part Numbers (CPN)

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

Affected Catalog Part Numbers (CPN)

HCS361-I/P
HCS362-I/P
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

JAON-15ERIE320 - CCB 1744 Final Notice: Qualification of PdCu bondwire 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

Affected Catalog Part Numbers (CPN)

PIC16C55-LPI/SP
PIC16C55-RC/P
PIC16C55-RC/SP
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

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Affected Catalog Part Numbers (CPN)

PIC16C57-XTI/P
PIC16C57-XTI/SP
PIC16C71-04/P
PIC16C71-04I/P
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

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Affected Catalog Part Numbers (CPN)

TC1413NCPA
TC1413NEPA
TC1426CPA
TC1427CPA
TC1427EPA
TC1427VPA
TC1428CPA
TC1428VPA
TC426CPA
TC426EPA
TC427CPA
TC427EPA
TC427VPA
TC428CPA
TC428CPAROC
TC428EPA
TC429CPA
TC429EPA
TC4403CPA
TC4403EPA
TC4404CPA
TC4404EPA
TC4405CPA
TC4405EPA
TC4420CPA
TC4420EPA
TC4420VPA
TC4421AVPA
TC4421CPA
TC4421EPA
TC4421VPA
TC4422AVPA
TC4422CPA
TC4422EPA
TC4422VPA
TC4423AVPA
TC4423CPA
TC4423EPA
TC4423VPA
TC4424AVPA
TC4424CPA
TC4424EPA
TC4424VPA
TC4425AVPA
TC4425CPA
TC4425EPA

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Affected Catalog Part Numbers (CPN)

TC4425VPA
TC4426ACPA
TC4426AEPA
TC4426AVPA
TC4426CPA
TC4426EPA
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

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Affected Catalog Part Numbers (CPN)

TC620HEPA
TC621CCPA
TC621CEPA
TC621HCPA
TC621HEPA
TC622CPA
TC622EPA
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

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Affected Catalog Part Numbers (CPN)

TC7662BCPA
TC7662BEPA
TC850CPL
TC913ACPA
TC913BCPA
TC9400CPD
TC9401CPD
TC9402CPD
TC962CPA
TC962EPA

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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

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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	JESD22-A104	231(0)	0/231	Pass	Parts had been pre-conditioned at 260°C
	Bond Strength: Wire Pull (> 2.5 grams)		15 (0)	0/15	Pass	
	Bond Shear (15.00 grams)		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	