Product Change Notification - JAON-15VCCB774

(Printer Friendly)

Date:	29 Jul 2016
Product Category:	Analog (Linear & Mixed Signal) AND Interface
Notification subject:	CCB 2593 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 120K wafer technology available in 8L MSOP package at MTAI assembly 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 with gold flash (CuPdAu) bond wire in selected products of the 120K wafer technology available in 8L MSOP package at MTAI assembly site.

Pre Change:
Gold (Au) bond wire

Post Change:
Palladium coated copper with gold flash (CuPdAu) bond wire

Pre and Post Change Summary:

	Pre Change	Post Change

Molding compound material	G600	G600
Lead frame material	CDA194	CDA194

Impacts to Data Sheet:
None

Change Impact:
None

Reason for Change:
To improve productivity and qualifying Palladium coated copper with gold flash (CuPdAu) bond wire.

Change Implementation Status:
In Progress

Estimated First Ship Date:
August 15, 2016 (date code: 1633)

NOTE: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Time Table Summary:

	June 2016					**July 2016**				**August 2016**			
Workweek	22	23	24	25	26	27	28	29	30	31	32	33	34
Initial PCN Issue Date			X										
Qual Report Availability									X				

Markings to Distinguish Revised from Unrevised Devices:
Traceability code

Qualification Report:
Please open the attachments included with this PCN labeled as PCN_#_Qual Report.

Revision History:
June 13, 2016: Issued initial notification.
July 29, 2016: Issued final notification. Attached the qualification report. Provided estimated first ship date that will be on August 15, 2016

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-15VCCB774_Qual_Report.pdf
PCN_JAON-15VCCB774_Affected_CPN.pdf
PCN_JAON-15VCCB774_Affected_CPN.xls

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

Terms and Conditions:

If you wish to change your product/process change notification (PCN) profile please log on to our website at http://www.microchip.com/PCN sign into myMICROCHIP to open the myMICROCHIP home page, then select a profile option from the left navigation bar.

To opt out of future offer or information emails (other than product change notification emails), click here to go to microchipDIRECT and login, then click

JAON-15VCCB774 - CCB 2593 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 120K wafer technology available in 8L MSOP package at MTAI site.

Affected Catalog Part Numbers (CPN)

PCN_JAON-15VCCB774
CATALOG_PART_NBR
MCP1650R-E/MS
MCP1650RT-E/MS
MCP1650S-E/MS
MCP1650ST-E/MS
MCP1651R-E/MS
MCP1651RT-E/MS
MCP1651S-E/MS
MCP1651ST-E/MS
MCP1652R-E/MS
MCP1652RT-E/MS
MCP1652S-E/MS
MCP1652ST-E/MS
MCP3001-I/MS
MCP3002-I/MS
MCP3201-CI/MS
MCP3201T-CI/MS
MCP3202-CI/MS
MCP3202T-CI/MS
MCP3301-BI/MS
MCP3301-CI/MS
MCP3301T-BI/MS
MCP3301T-CI/MS
MCP6002-E/MS
MCP6002-I/MS
MCP6002T-E/MS
MCP6002T-E/MSHAZ
MCP6002T-I/MS
MCP6021-E/MS
MCP6021T-E/MS
MCP6031-E/MS
MCP6031T-E/MS
MCP6032-E/MS
MCP6032T-E/MS
MCP6033-E/MS
MCP6033T-E/MS
MCP6041-E/MS
MCP6041-I/MS
MCP6041T-E/MS
MCP6041T-I/MS
MCP6042-E/MS
MCP6042-I/MS
MCP6042T-E/MS
MCP6042T-I/MS

JAON-15VCCB774 - CCB 2593 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 120K wafer technology available in 8L MSOP package at MTAI site.

Affected Catalog Part Numbers (CPN)

PCN_JAON-15VCCB774
CATALOG_PART_NBR
MCP6043-E/MS
MCP6043-I/MS
MCP6043T-E/MS
MCP6043T-I/MS
MCP6141-E/MS
MCP6141-I/MS
MCP6141T-E/MS
MCP6141T-I/MS
MCP6142-E/MS
MCP6142-I/MS
MCP6142T-E/MS
MCP6142T-I/MS
MCP6143-E/MS
MCP6143-I/MS
MCP6143T-E/MS
MCP6143T-I/MS
MCP616-I/MS
MCP616T-I/MS
MCP617-I/MS
MCP617T-I/MS
MCP618-I/MS
MCP618T-I/MS
MCP6231-E/MS
MCP6231T-E/MS
MCP6232-E/MS
MCP6232T-E/MS
MCP6241-E/MS
MCP6241T-E/MS
MCP6242-E/MS
MCP6242T-E/MS
MCP6271-E/MS
MCP6271T-E/MS
MCP6272-E/MS
MCP6272T-E/MS
MCP6273-E/MS
MCP6273T-E/MS
MCP6275-E/MS
MCP6275T-E/MS
MCP6281-E/MS
MCP6281T-E/MS
MCP6282-E/MS
MCP6282T-E/MS
MCP6283-E/MS

JAON-15VCCB774 - CCB 2593 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 120K wafer technology available in 8L MSOP package at MTAI site.

Affected Catalog Part Numbers (CPN)

PCN_JAON-15VCCB774
CATALOG_PART_NBR
MCP6283T-E/MS
MCP6285-E/MS
MCP6285T-E/MS
MCP6291-E/MS
MCP6291T-E/MS
MCP6292-E/MS
MCP6292-E/MSAAA
MCP6292T-E/MS
MCP6292T-E/MSAAA
MCP6293-E/MS
MCP6293T-E/MS
MCP6295-E/MS
MCP6295T-E/MS
MCP6442-E/MS
MCP6442T-E/MS
MCP6541-E/MS
MCP6541-I/MS
MCP6541T-E/MS
MCP6541T-I/MS
MCP6542-E/MS
MCP6542-I/MS
MCP6542T-E/MS
MCP6542T-I/MS
MCP6543-E/MS
MCP6543-I/MS
MCP6543T-E/MS
MCP6543T-I/MS
MCP6546-E/MS
MCP6546-I/MS
MCP6546T-E/MS
MCP6546T-I/MS
MCP6547-E/MS
MCP6547-I/MS
MCP6547T-E/MS
MCP6547T-I/MS
MCP6548-E/MS
MCP6548-I/MS
MCP6548T-E/MS
MCP6548T-I/MS
MCP6G01-E/MS
MCP6G01T-E/MS
MCP6G02-E/MS
MCP6G02T-E/MS

JAON-15VCCB774 - CCB 2593 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 120K wafer technology available in 8L MSOP package at MTAI site.

Affected Catalog Part Numbers (CPN)

PCN_JAON-15VCCB774
CATALOG_PART_NBR
MCP6G03-E/MS
MCP6G03T-E/MS
MCP6L02T-E/MS
MCP6L1T-E/MS
MCP6L2T-E/MS
MCP6L71T-E/MS
MCP6L72T-E/MS
MCP6L91T-E/MS
MCP6L92T-E/MS
MCP6L92T-E/MSHHH
MCP6S21-I/MS
MCP6S21T-I/MS
MCP6S22-I/MS
MCP6S22T-I/MS
MCP6S91-E/MS
MCP6S91T-E/MS
MCP6S92-E/MS
MCP6S92T-E/MS

QUALIFICATION REPORT

RELIABILITY LABORATORY

PCN #: JAON-15VCCB774

Date
June 09, 2016

Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 120K wafer technology available in 8L MSOP package at MTAI assembly site.

Distribution

Somnuek T.	Rangsun K.
V.Danginis	A. Navarro
Wichai K.	J. Fernandez
Payungsak W.	

Microchip Technology (Thailand) Co., Ltd.
14 Moo 1 T.Wangtakien A. Muangchacherngsao,
Chacherngsao, Thailand, 24000
Tel. (+66 38) 857119-45, 857311-19 ext. 1231
Fax (+66 38) 857149-50

MICROCHIP

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 120K wafer technology available in 8L MSOP package at MTAI assembly site.
CN	BC160559
QUAL ID	Q16094
MP CODE	A7BV8YA3XA00
Part No.	MCP6282T-E/MS
Bonding No.	BDM-001069 Rev. A

(CCB#2593)

Package

Type	8L MSOP
Package size	3x3 mm
Die thickness	8 mils
Die size	43.5 x 58.0 mils

Lead Frame

Paddle size	68 x 94 mils
Material	CDA194
Surface	Bare Copper DAP
Process	Stamped
Lead Lock	No
Part Number	10100839
Treatment	Brown Oxide Treatment

Die attach material

Epoxy	8390A
Wire	CuPdAu wire
Mold Compound	G600V
Plating Composition	Matte Tin

MICROCHIP

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MTAI165205625.000	TMPE216358604.G00	1613M1P
MTAI165205766.000	TMPE216358604.G00	1613PUH
MTAI165205767.000	TMPE216358604.G00	1613PUJ

Result [X] Pass [ ] Fail [ ] ____________________

8L MSOP (3x3) assembled by MTAI pass reliability test per QCI-39000.This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260℃ reflow temperature per IPC/JEDEC J-STD-020D standard.

Prepared By:____________________**Date:** June 09, 2016 **(Sr.Reliability Engineer)**

(Mr.Thinnapol Nakkasun)

Approved By:____________________**Date:** June 09, 2016 **(Reliability Manager)**

(Mr. Somnuek Thongprasert)

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)	85℃/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265℃ max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020D)	IPC/JEDEC J-STD-020D	135	0/135	Pass	

Precondition Prior Perform Reliability Tests (At MSL Level 1)	**Electrical Test :**+25℃ and 125℃ System: ETS300	JESD22-A113	693(0)	693		Good Devices
	Bake 150℃, 24 hrs System: CHINEE			693		
	85℃/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265℃ max			693		
	System: Vitronics Soltec MR1243					
	Electrical Test :+25℃ and 125℃ System: ETS300			0/693	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	**Stress Condition:** (Standard) 65℃ to +150℃, 500 Cycles System : TABAI ESPEC TSA-70H	JESD22-A104		231		Parts had been pre-conditioned at 260℃
	Electrical Test: +125℃ System: ETS300		231(0)	0/231	Pass	77 units / lot
	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℃/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		231		Parts had been pre-conditioned at 260℃
	Electrical Test: +25℃ System: ETS300		231(0)	0/231	Pass	77 units / lot

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
HAST	**Stress Condition:** (Standard) +130℃/85%RH,96 hrs. **Bias Volt:** 5.0 Volts System: HAST 6000X	JESD22-A118		231		Parts had been pre-conditioned at 260℃
	Electrical Test: +25℃ and 125℃ System: ETS300		231(0)	0/231	Pass	77 units / lot
High Temperature Storage Life	**Stress Condition:** Bake 175℃, 504 hrs System: SHEL LAB	JESD22-A103		45		45 units
	Electrical Test :+25℃ and 125℃ System: ETS300		45(0)	0/45	Pass	
Cross section	Cross section Inspection 3 units / lot		9(0) Wires	0/9		
Bond Strength	Wire Pull (>2.5 grams)	M2011	30 (0) Wires	0/30	Pass	
Data Assembly	Bond Shear (>15.00 grams)	JESD22-B116	30 (0) bonds	0/30	Pass	