Product Change Notification - JAON-22VBSE169

Date: 11 Aug 2017

Product Category: Interface- LIN Transceiver; Interface- Controller Area Network (CAN); Piezoelectric Horn Drivers

Notification subject: CCB 2543 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire for products fabricated at XFGM available in 8L SOIC package at MMT 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 for products fabricated at XFGM available in 8L SOIC package at MMT 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
Assembly Site	MMT assembly site	MMT assembly site
Wire material	Au wire	CuPdAu wire
Die attach material	8390A or 2200D	8390A
Molding compound material	G600V	G600V
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:
September 8, 2017 (date code: 1736)

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

Summary Table:

	March 2016					**->**	**August 2017**				**September 2017**				
WW	09	10	11	12	13		31	32	33	34	35	36	37	38	39
Initial PCN Issue Date	X														
Qual Report Availability								X							
Final PCN Issue Date								X							
Implementation Date												X			

Method to Identify Change:
Traceability code

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

Revision History:
March 2, 2016: Issued initial notification.
August 11, 2017: Issued final notification. Attached the qualification report. Revised the estimated first ship date from June 30, 2016 to September 8, 2017.

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-22VBSE169_Qual Report.pdf
PCN_JAON-22VBSE169_Affected CPN.pdf
PCN_JAON-22VBSE169_Affected CPN.xlsx

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 on the "My account" link, click on "Update profile" and un-check the box that states "Future offers or information about Microchip's products or services."

JAON-22VBSE169 - CCB 2543 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire for products fabricated at XFGM available in 8L SOIC package at MMT assembly site.

Affected Catalog Part Numbers (CPN)

PCN_JAON-22VBSE169
CATALOG_PART_NBR
MCP2025-330E/SN
MCP2025-500E/SN
MCP2025T-330E/SN
MCP2025T-500E/SN
MCP2551-E/SN
MCP2551-I/SN
MCP2551T-E/SN
MCP2551T-I/SN
RE46C108S8F
RE46C108S8TF
RE46C117S8F
RE46C117S8TF
RE46C317S8F
RE46C317S8TF
RE46C318S8F
RE46C318S8TF

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: JAON-22VBSE169

Date
March 03, 2017

Qualification of palladium coated copper with gold flash (CuPdAu) bond wire for selected products fabricated at XFGM available in 8L SOIC package at MMT assembly site.

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of palladium coated copper with gold flash (CuPdAu) bond wire for selected products fabricated at XFGM available in 8L SOIC package at MMT assembly site.
CN	ES083826-17887
QUAL ID	Q16201
MP CODE	VK0014C2XA00
Part No.	MCP2551-E/SN
Bonding No.	BDM-000949 Rev. A
CCB No.	2543
Package	
Type	8L SOIC
Package size	150 mils
Die thickness	15 mils
Die size	103.40 x 62.30 mils
Lead Frame	
Paddle size	95 x 130 mils
Material	CDA194
Surface	Bare Cu
Process	Stamped
Lead Lock	No
Part Number	10100819
Treatment	BOT
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
MMT-173500933.000	XFGM917328559.200	1647BUY
MMT-173600569.000	XFGM917328559.200	1648JE7
MMT-173600570.000	XFGM917328559.200	1648JER

Result [X] Pass [ ] Fail [ ] ____________________

8L SOIC (.150”) assembled by MMT pass reliability test per QCI-39000.
This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

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°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C 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°C and 125°C System: J750	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE			693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test :+25°C and 125°C System: J750			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°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H	JESD22-A104		231		Parts had been pre-conditioned at 260°C
	Electrical Test: + 125°C System: J750		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (> 4.00 grams)		15 (0)	0/15	Pass	
	Bond Shear (>18.00 grams)		15 (0)	0/15	Pass	
UNBIASED-HAST	**Stress Condition:** (Standard) +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: J750		231(0)	0/231	Pass	77 units / lot
HAST	**Stress Condition:** (Standard) +130°C/85%RH, 96 hrs. **Bias Volt:** 5.5 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 260°C
	Electrical Test:+ 25°C and 125°C System: J750		231(0)	0/231	Pass	77 units / lot

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 and 125°C System: J750		45(0)	0/45	Pass	
Bond Strength Data Assembly	Wire Pull (> 4.00 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>18.00 grams)	JESD22-B116	30 (0) bonds	0/30	Pass	