Product Change Notification - JAON-21DZUH494

Date: 30 Jul 2015

Product Category: Analog (Linear & Mixed Signal) AND Interface; 8-bit Microcontrollers; Analog (Thermal, Power Management & Safety)

Notification subject: CCB 1708 Initial Notice: Qualification of CuPdAu bond wire and G700LS molding compound in selected products of the 150K and 160K wafer technologies available in 28L SSOP package at ANAP assembly site.

Notification text:

PCN Status:

Initial 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 and G700LS molding compound in selected products of the 150K and 160K wafer technologies available in 28L SSOP package at ANAP assembly site.

Pre Change:

Gold wire (Au) and G600 molding compound.

Post Change:

Palladium coated copper wire with gold flash (CuPdAu) and G700LS molding

compound.

Impacts to Data Sheet:
None

Reason for Change:

To improve manufacturability and qualify palladium coated copper with gold flash (CuPdAu) bond wire.

Change Implementation Status:
In Progress

Estimated First Ship Date:
November 15, 2015 (date code: 1546)

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:
July 30, 2015: 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-21DZUH494 Qual Plan.pdf PCN JAON-21DZUH494 Affected CPN.pdf PCN JAON-21DZUH494 Affected CPN.xls

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

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PCN_JAON-21DZUH494
CATALOG_PART_NBR
HA1930-I/SS
HA1930T-I/SS
HA2030-I/SS
HA2030T-I/SS
HA4314-I/SS021
HA4315T-I/SS
HA4315T-I/SS022
MCP23016-I/SS
MCP23016T-I/SS
MCP23017-E/SS
MCP23017T-E/SS
MCP23S17-E/SS
MCP23S17T-E/SS
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PIC16F570-I/SS
PIC16F570T-I/SS
PIC16F57-E/SS
PIC16F57-I/SS
PIC16F57T-E/SS
PIC16F57T-I/SS
PIC16F57T-I/SS024
PIC16F57T-I/SS025
PIC16F57T-I/SS027
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PIC16F882T-I/SS026
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PIC16LF72T-I/SS
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PIC16LF73T-I/SS
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PIC16LF767T-I/SS
PIC16LF76-I/SS
PIC16LF76T-I/SS
PIC16LF873A-I/SS
PIC16LF873AT-I/SS
PIC16LF876A-I/SS
PIC16LF876AT-I/SS
PIC16LF876AT-I/SSC26
PIC18F2221-E/SS
PIC18F2221-I/SS
PIC18F2221T-I/SS
PIC18F2321-E/SS
PIC18F2321-I/SS
PIC18F2321T-E/SS
PIC18LF2221-I/SS
PIC18LF2221T-I/SS
PIC18LF2321-I/SS
PIC18LF2321T-I/SS
PS501-I/SSC05
PS501T-I/SSC01
PS501T-I/SSC05

QUALIFICATION PLAN

PCN #: JAON-21DZUH494

Date:
July 15, 2015

Qualification of palladium coated copper with gold flash (CuPdAu) bond wire and G700LS molding compound in selected products of the 150K and 160K wafer technologies available in 28L SSOP package at ANAP assembly site.

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Purpose:_______________ Qualification of palladium coated copper with gold flash (CuPdAu) bond wire and G700LS molding compound in selected products of the 150K and 160K wafer technologies available in 28L SSOP package at ANAP assembly site.
MP code: _______________ DE021TN2X024
Part No.:_______________ PIC16F57T-I/SS024
BD No:_______________ BDM-000835B
CCB No.:_______________ 1708

Package:

Type __________________ 28L SSOP

Width or Size ___________ 0.209"

Die thickness: __________ 15

Die size: _______________ 60.5x53.9

MSL: __________________ 1

Lead frame:

Paddle size: ____________ 154x200

Material ________________ C194

Surface ________________ Ring Ag

Treatment _____________ Rough

Process ________________ etched

Leadlock _______________ yes

Part Number ____________ 101383340

Strip __________________ OMLF

Wire:

Material ________________ CuPdAu

Die Attach Epoxy:

Part Number ____________ 8290

Conductive _____________ Yes

Mold Compound:

Part Number ____________ G700LS

Lead finish: _______________ matte tin

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
Standard Pb-free Solderability	JESD22B-102E; Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Standard Pb-free: Matte tin/ NiPdAu finish, SAC solder, wetting temp 245°C for both SMD & through hole packages.	22	5	1	27	> 95% lead coverage	5	Standard Pb-free solderability is the requirement. SnPb solderability (backward solderability- SMD reflow soldering) is required for any plating related changes and highly recommended for other package BOM changes.
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	3	24	0 fails after TC	5	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	3	24	0	5	30 bonds from a minimum of 5 devices.
Wire Sweep		5	0	3	15	0		Required for any reduction in wire bond thickness.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	~~5~~	
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 +25°C and hot temp.85oC, (1 lot to be tested at 125°C)	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.
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. MSL1 @ 260°C	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 96/192 hours. Electrical test pre and post stress at +25°C and hot temp. (1 lot to be tested at 125°C)	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

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
Unbiased HAST	+130°C/85% RH for 96/192 hrs. Electrical test pre and post stress at +25°C	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	-65°C to +150°C for 500/1000 cycles. Electrical test pre and post stress at hot temp; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress. (1 lot to be tested at 125°C)	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.