Product Change Notification - JAON-16HTIO720

Date: 18 Feb 2015

Product Category: 16-bit Microcontrollers and Digital Signal Controllers; Analog (Linear & Mixed Signal) AND Interface; 8-bit Microcontrollers

Notification subject: CCB 1155.39 Initial Notice: Qualification of palladium coated copper (PdCu) bond wire and 3280 die attach epoxy in selected products of the 150K and 160K wafer technologies available in 18L SOIC

Notification text:

PCN Status:

Initial notification

Microchip Parts Affected:

See attachments of affected catalog part numbers (CPN) labeled as…

PCN_JAON-16HTIO720_Affected_CPN.xls

PCN_JAON-16HTIO720_Affected_CPN.pdf

Description of Change:

Qualification of palladium coated copper (PdCu) bond wire and 3280 die attach epoxy in selected products of the 150K and 160K wafer technologies available in 18L SOIC package at MTAI assembly site.

NOTE: Selected products are non-automotive devices. Please review the

affected CPN lists (attached) to identify the actual parts affected.

Pre Change:

Gold wire and 8390A die attach epoxy

Post Change:

PdCu wire and 3280 die attach epoxy

Impacts to Data Sheet:

None

Reason for Change:

To improve manufacturability and qualify PdCu bond wire at MTAI assembly site.

Change Implementation Status:

In Progress

Estimated First Ship Date:

May 27, 2015 (date code: 1522)

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:

February 18, 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-16HTIO720_Qual_Plan.pdf PCN_JAON-16HTIO720_Affected_CPN.pdf PCN_JAON-16HTIO720_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 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."

PCN_JAON-16HTIO720
CATALOG_PART_NBR
DSPIC30F2011-20E/SO
DSPIC30F2011-20I/SO
DSPIC30F2011-30I/SO
DSPIC30F2011T-20E/SO
DSPIC30F2011T-20I/SO
DSPIC30F2011T-30I/SO
DSPIC30F3012-20E/SO
DSPIC30F3012-20I/SO
DSPIC30F3012-30I/SO
MCP2140A-I/SO
MCP2140AT-I/SO
MCP23008-E/SO
MCP23008T-E/SO
MCP23009-E/SO
MCP23009T-E/SO
MCP23S08-E/SO
MCP23S08T-E/SO
MCP23S09-E/SO
MCP23S09T-E/SO
MCP2515-E/SO
MCP2515-E/SORB2
MCP2515-E/SORB4
MCP2515-I/SO
MCP2515-I/SOGRB2
MCP2515-I/SORB2
MCP2515-I/SORB4
MCP2515T-E/SO
MCP2515T-E/SORB2
MCP2515T-E/SORB4
MCP2515T-I/SO
MCP2515T-I/SORB2
MCP2515T-I/SORB4
MCV18A-I/SO
MCV18E-I/SO
PIC16F54-E/SO
PIC16F54-E/SO037
PIC16F54-I/SO
PIC16F54-I/SO023
PIC16F54-I/SO033
PIC16F54-I/SO034
PIC16F54-I/SOG
PIC16F54T-E/SO
PIC16F54T-E/SO037
PIC16F54T-E/SO039
PIC16F54T-E/SO040
PIC16F54T-I/SO
PIC16F54T-I/SO028
PIC16F54T-I/SO029

PIC16F54T-I/SO033
PIC16F54T-I/SO034
PIC16F54T-I/SO036
PIC16F627A-E/SO
PIC16F627A-I/SO
PIC16F627AT-E/SO
PIC16F627AT-I/SO
PIC16F627AT-I/SO034
PIC16F628A-E/SO
PIC16F628A-I/SO
PIC16F628A-I/SO065
PIC16F628A-I/SOG
PIC16F628AT-E/SO
PIC16F628AT-I/SO
PIC16F628AT-I/SO044
PIC16F628AT-I/SO051
PIC16F628AT-I/SO052
PIC16F628AT-I/SO064
PIC16F628AT-I/SO065
PIC16F628AT-I/SOG
PIC16F648A-E/SO
PIC16F648A-I/SO
PIC16F648A-I/SOC06
PIC16F648AT-E/SO
PIC16F648AT-I/SO
PIC16F648AT-I/SO044
PIC16F648AT-I/SO047
PIC16F648AT-I/SO050
PIC16F648AT-I/SO052
PIC16F648AT-I/SOC12
PIC16F716-E/SO
PIC16F716-I/SO
PIC16F716-I/SO030
PIC16F716-I/SO4AP
PIC16F716T-E/SO
PIC16F716T-I/SO
PIC16F716T-I/SO048
PIC16F716T-I/SO061
PIC16F818-E/SO
PIC16F818-I/SO
PIC16F818-I/SOTSL
PIC16F818-I/SOV04
PIC16F818T-E/SO
PIC16F818T-I/SO
PIC16F819-E/SO
PIC16F819-I/SO
PIC16F819-I/SOTSL
PIC16F819-I/SOV05
PIC16F819T-E/SO
PIC16F819T-I/SO

PIC16F819T-I/SOG
PIC16F819T-I/SOTSL
PIC16F87-E/SO
PIC16F87-I/SO
PIC16F87T-E/SO
PIC16F87T-I/SO
PIC16F88-E/SO
PIC16F88-I/SO
PIC16F88T-I/SO
PIC16LF627A-I/SO
PIC16LF627A-I/SOC12
PIC16LF627AT-I/SO
PIC16LF627AT-I/SOC12
PIC16LF628A-I/SO
PIC16LF628AT-I/SO
PIC16LF648A-I/SO
PIC16LF648AT-I/SO
PIC16LF648AT-I/SO045
PIC16LF648AT-I/SO053
PIC16LF818-I/SO
PIC16LF818T-I/SO
PIC16LF818T-I/SOTSL
PIC16LF819-I/SO
PIC16LF819-I/SOC07
PIC16LF819-I/SOC23
PIC16LF819-I/SOG
PIC16LF819-I/SOTSL
PIC16LF819T-I/SO
PIC16LF819T-I/SO043
PIC16LF819T-I/SO044
PIC16LF819T-I/SO045
PIC16LF819T-I/SO048
PIC16LF819T-I/SO050
PIC16LF819T-I/SO055
PIC16LF819T-I/SOTSL
PIC16LF87-I/SO
PIC16LF87T-I/SO
PIC16LF88-I/SO
PIC16LF88-I/SOG
PIC16LF88T-I/SO
PIC18F1220-E/SO
PIC18F1220-H/SO
PIC18F1220-I/SO
PIC18F1220T-I/SO
PIC18F1230-E/SO
PIC18F1230-I/SO
PIC18F1320-E/SO
PIC18F1320-H/SO
PIC18F1320-I/SO
PIC18F1320-I/SOC04

PIC18F1320-I/SOC10
PIC18F1320T-E/SO
PIC18F1320T-I/SO
PIC18F1320T-I/SOG
PIC18F1330-E/SO
PIC18F1330-I/SO
PIC18F1330T-E/SO
PIC18F1330T-I/SO
PIC18LF1220-I/SO
PIC18LF1230-I/SO
PIC18LF1320-I/SO
PIC18LF1320-I/SOG
PIC18LF1320T-I/SO
PIC18LF1330-I/SO

QUALIFICATION PLAN

PCN #: JAON-16HTIO720

Date:
Feb 11, 2015

Qualification of palladium coated copper (PdCu) bond wire and 3280 die attach epoxy in selected products of the 150K and 160K wafer technologies available in 18L SOIC package at MTAI assembly site.

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Purpose:______________Qualification of palladium coated copper (PdCu) bond wire and 3280 die attach epoxy in selected products of the 150K and 160K wafer technologies available in 18L SOIC package at MTAI assembly site.

Mask:_________________DE020

Part Number:___________PIC16F54

Die Size:_______________40.2x46.2

Bonding Diagram No.:___BDM-000638/A

CCB No.:______________1155.39

Package:

Type ___________________18L SOIC

Width or Size ____________300 mils

Die thickness: ___________15 mils

Die size: ________________see above table

Lead frame:

Paddle size: _____________120 x 120 mils

Material_________________A194

Surface_________________Bare copper on paddle

Process ________________Stamp

Lead Lock ______________No

Part Number_____________10101815

Treatment_______________Brown Oxide Treatment

Wire:

Material_________________PdCu

Die Attach Epoxy:

Part Number_____________3280

Conductive______________Yes

Mold Compound: __________G600V

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
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5	30 bonds from a minimum of 5 devices.
HTSL (High Temp Storage Life)	+175 C for 504 hours or 150°C for 1008 hrs. Electrical test pre and post stress at +25C and hot temp.	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. Perform SAM analysis using the standard sample size. MSL-1 @ 260°C	231	15	4	984	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 hours. Electrical test pre and post stress at +25°C and hot temp. 1 lot tested at 125C	77	5	4	328	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Unbiased HAST	+130°C/85% RH for 96 hrs	77	5	4	328	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 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 tested at 125C	77	5	4	328	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.