Product Change Notification - JAON-26SYMB368

Date: 13 Oct 2015

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

Notification subject: CCB 1725 Initial Notice: Qualification of 8390A die attach material for products available 18L SOIC package using palladium coated copper wire (PdCu) bond wire at MTAI 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 8390A die attach material for products available 18L SOIC package using palladium coated copper wire (PdCu) bond wire at MTAI assembly site

Pre Change:
3280 die attach material

Post Change:
3280 die attach material or 8390A die attach material

Impacts to Data Sheet:
None

Reason for Change:
To improve on-time delivery performance by qualifying 8390A die attach material.

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:
October 13, 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-26SYMB368_Qual_Plan.pdf PCN_JAON-26SYMB368_Affected_CPN.pdf PCN_JAON-26SYMB368_Affected_CPN.xls

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

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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-26SYMB368 - CCB 1725 Initial Notice: Qualification of 8390A die attach material for products available 18L SOIC package using palladium coated copper wire (PdCu) bond wire at MTAI assembly site.

Affected Catalog Part Numbers (CPN)

PCN_JAON-26SYMB368
CATALOG_PART_NBR
CF745-04/SO
MCP2140A-I/SO
MCP2140AT-I/SO
MCP2140-I/SO
MCP2140-I/SORVB
MCP2140T-I/SO
MCP2140T-I/SORVB
MCP23008-E/SO
MCP23008T-E/SO
MCP23S08-E/SO
MCP23S08T-E/SO
MCP2515-E/SO
MCP2515-E/SORB2
MCP2515-E/SORB4
MCP2515-I/SO
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
PIC16C54C-04/SO
PIC16C54C-04/SOC04
PIC16C54C-04E/SO
PIC16C54C-04I/SO
PIC16C54C-20/SO
PIC16C54C-20E/SO
PIC16C54C-20I/SO
PIC16C54C-40/SO
PIC16C54CT-04/SO
PIC16C54CT-04/SO098
PIC16C54CT-04/SO120
PIC16C54CT-04I/SO
PIC16C54CT-04I/SO104
PIC16C54CT-04I/SO158
PIC16C54CT-20/SO
PIC16C54CT-20/SO068
PIC16C54CT-20I/SO157
PIC16C56A-04/SO
PIC16C56A-04E/SO

JAON-26SYMB368 - CCB 1725 Initial Notice: Qualification of 8390A die attach material for products available 18L SOIC package using palladium coated copper wire (PdCu) bond wire at MTAI assembly site.

Affected Catalog Part Numbers (CPN)

PCN_JAON-26SYMB368
CATALOG_PART_NBR
PIC16C56A-04I/SO
PIC16C56A-20/SO
PIC16C56A-20E/SO
PIC16C56A-20I/SO
PIC16C56A-40/SO
PIC16C56AT-04/SO
PIC16C56AT-04/SO027
PIC16C56AT-04/SO040
PIC16C56AT-04I/SO
PIC16C56AT-04I/SO030
PIC16C56AT-04I/SO034
PIC16C56AT-04I/SO038
PIC16C56AT-04I/SO040
PIC16C58B-04/SO
PIC16C58B-04/SO056
PIC16C58B-04E/SO
PIC16C58B-04I/SO
PIC16C58B-04I/SO082
PIC16C58B-20/SO
PIC16C58B-20E/SO
PIC16C58B-20I/SO
PIC16C58B-40/SO
PIC16C58BT-04/SO
PIC16C58BT-04I/SO
PIC16C58BT-04I/SO069
PIC16C58BT-04I/SO080
PIC16C58BT-04I/SO082
PIC16C620A-04/SO
PIC16C620A-04E/SO
PIC16C620A-04I/SO
PIC16C620A-20/SO
PIC16C620A-20E/SO
PIC16C620A-20I/SO
PIC16C620A-40/SO
PIC16C620AT-04/SO
PIC16C620AT-04/SO058
PIC16C620AT-04I/SO
PIC16C620AT-04I/SO076
PIC16C620AT-04I/SO077
PIC16C620AT-20/SO
PIC16C620AT-20I/SO
PIC16C621A-04/SO
PIC16C621A-04E/SO
PIC16C621A-04I/SO

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Affected Catalog Part Numbers (CPN)

PCN_JAON-26SYMB368
CATALOG_PART_NBR
PIC16C621A-20/SO
PIC16C621A-20E/SO
PIC16C621A-20I/SO
PIC16C621A-40/SO
PIC16C621AT-04/SO
PIC16C621AT-04E/SO
PIC16C621AT-04I/SO
PIC16C621AT-04I/SO050
PIC16C621AT-04I/SO081
PIC16C621AT-20/SO
PIC16C621AT-20I/SO
PIC16C621AT-20I/SO051
PIC16C621AT-20I/SO060
PIC16C621AT-20I/SO086
PIC16C622A-04/SO
PIC16C622A-04E/SO
PIC16C622A-04I/SO
PIC16C622A-20/SO
PIC16C622A-20E/SO
PIC16C622A-20I/SO
PIC16C622A-40/SO
PIC16C622AT-04/SO
PIC16C622AT-04E/SO
PIC16C622AT-04I/SO
PIC16C622AT-04I/SO091
PIC16C622AT-04I/SO092
PIC16C622AT-04I/SO093
PIC16C622AT-04I/SO094
PIC16C622AT-20/SO
PIC16C622AT-20/SOC03
PIC16C622AT-20E/SO
PIC16C622AT-20I/SO
PIC16CR54C-04I/SO122
PIC16CR54CT-04/SO124
PIC16CR54CT-20/SO012
PIC16CR58B-04/SO056
PIC16CR58B-04/SO062
PIC16CR58BT-04/SO074
PIC16CR620AT-04I/SO016
PIC16CR620AT-04I/SO017
PIC16CR620AT-04I/SO020
PIC16F1826-E/SO
PIC16F1826-I/SO
PIC16F1826T-E/SO

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Affected Catalog Part Numbers (CPN)

PCN_JAON-26SYMB368
CATALOG_PART_NBR
PIC16F1826T-I/SO
PIC16F1826T-I/SO024
PIC16F1826T-I/SO027
PIC16F1827-E/SO
PIC16F1827-I/SO
PIC16F1827-I/SOC06
PIC16F1827T-E/SO
PIC16F1827T-E/SO035
PIC16F1827T-I/SO
PIC16F1827T-I/SOC06
PIC16F1847-E/SO
PIC16F1847-I/SO
PIC16F1847-I/SOC02
PIC16F1847T-E/SO
PIC16F1847T-I/SO
PIC16F1847T-I/SOC02
PIC16F54-E/SO
PIC16F54-E/SO037
PIC16F54-I/SO
PIC16F54-I/SO023
PIC16F54-I/SO033
PIC16F54-I/SO034
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
PIC16F628AT-E/SO
PIC16F628AT-I/SO
PIC16F628AT-I/SO044
PIC16F628AT-I/SO051

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Affected Catalog Part Numbers (CPN)

PCN_JAON-26SYMB368
CATALOG_PART_NBR
PIC16F628AT-I/SO052
PIC16F628AT-I/SO064
PIC16F716-E/SO
PIC16F716-I/SO
PIC16F716-I/SO030
PIC16F716-I/SO4AP
PIC16F716T-E/SO
PIC16F716T-I/SO
PIC16F716T-I/SO048
PIC16F716T-I/SO061
PIC16LC54C-04/SO
PIC16LC54C-04I/SO
PIC16LC54CT-04/SO150
PIC16LC56A-04/SO
PIC16LC56A-04I/SO
PIC16LC58B-04/SO
PIC16LC58B-04I/SO
PIC16LC620A-04/SO
PIC16LC620A-04I/SO
PIC16LC620AT-04/SO
PIC16LC621A-04/SO
PIC16LC621A-04I/SO
PIC16LC621AT-04/SO
PIC16LC621AT-04I/SO
PIC16LC622A-04/SO
PIC16LC622A-04E/SO
PIC16LC622A-04I/SO
PIC16LC622AT-04/SO
PIC16LC622AT-04I/SO
PIC16LCR58BT-04I/SO053
PIC16LF1826-E/SO
PIC16LF1826-I/SO
PIC16LF1826T-I/SO
PIC16LF1827-E/SO
PIC16LF1827-I/SO
PIC16LF1827T-I/SO
PIC16LF1847-E/SO
PIC16LF1847-I/SO
PIC16LF1847T-I/SO
PIC16LF627A-I/SO
PIC16LF627A-I/SOC12
PIC16LF627AT-I/SO
PIC16LF627AT-I/SOC12
PIC16LF628A-I/SO

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Affected Catalog Part Numbers (CPN)

PCN_JAON-26SYMB368
CATALOG_PART_NBR
PIC16LF628AT-I/SO

QUALIFICATION PLAN

PCN #: JAON-26SYMB368

Date:
Aug 12, 2015

Qualification of 8390A die attach material for products available 18L SOIC package using palladium coated copper wire (PdCu) bond wire at MTAI assembly site.

Distribution

Surasit P.	G. Perzanowski.
Mitchell R.	F.Chen
Wichai K.	O. Baltazar
Chalermpon P.	

Microchip Technology (Thailand) Co., Ltd.
14 Moo 1 T. Wangtakien A. Muangchacherngsao,
Chacherngsao, Thailand, 24000
Tel. (6638) 857119-45, 857311-19 ext. 1231
Fax (6638) 857149-50

Purpose:________________ Qualification of 8390A die attach material for products available 18L SOIC package using palladium coated copper wire (PdCu) bond wire at MTAI assembly site.

MP code:________________ C5BR14F2XAXF

Part No.:________________ PIC16F819-E/SO

BD No:________________ BDM-000893 rev.A

CCB No.:________________ 1725

Package:

Type________________ 18L SOIC

Width or Size________________ 300 mils

Die thickness:________________ 15 mils

Die size:________________ 119.1 x 108.5 mils

Lead frame:

Paddle size:________________ 160 x 200 mils

Material________________ CDA194

Surface________________ Bare copper on paddle

Process________________ Stamped

Lead Lock________________ No

Part Number________________ 101018

Treatment________________ Brown Oxide Treatment (BOT)

Wire:

Material________________ PdCu

Die Attach Epoxy:

Part Number________________ 8390A

Conductive________________ Yes

Mold Compound:________________ G600V

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.
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 +25C and hot temp. (1 lot to be tested at 125C)	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. MSL-1 @ 260°C	231	15	1	246	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 to be tested at 125C)	77	5	1	82	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. Electrical test pre and post stress at +25°C	77	5	1	82	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 to be tested at 125C)	77	5	1	82	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

Purpose: Qualification of 8390A die attach material for products available 18L SOIC package using palladium coated copper wire (PdCu) bond wire at MTAI assembly site.

MP code: A7AB24F2XA04

Part No.: PIC16C621A-04E/SO

BD No: BDM-000904 rev.A

CCB No.: 1725

Package:

- **Type** 18L SOIC
- **Width or Size** 300 mils
- **Die thickness:** 15 mils
- **Die size:** 108.4 x 82.3 mils

Lead frame:

- **Paddle size:** 160 x 200 mils
- **Material** CDA194
- **Surface** Bare copper on paddle
- **Process** Stamped
- **Lead Lock** No
- **Part Number** 101018
- **Treatment** Brown Oxide Treatment (BOT)

Wire:

- **Material** PdCu

Die Attach Epoxy:

- **Part Number** 8390A
- **Conductive** Yes

Mold Compound: G600V

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.
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 +25C and hot temp. (1 lot to be tested at 125C)	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. MSL-1 @ 260°C	231	15	1	246	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 to be tested at 125C)	77	5	1	82	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. Electrical test pre and post stress at +25°C	77	5	1	82	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 to be tested at 125C)	77	5	1	82	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

Purpose: Qualification of 8390A die attach material for products available 18L SOIC package using palladium coated copper wire (PdCu) bond wire at MTAI assembly site.

MP code: YGAQ14F2XAAA

Part No.: PIC24HJ12GP201-E/SO

BD No: BDM-000895 rev.A

CCB No.: 1725

Package:

- **Type** 18L SOIC
- **Width or Size** 300 mils
- **Die thickness:** 15 mils
- **Die size:** 123.9 x 135.3 mils

Lead frame:

- **Paddle size:** 160 x 200 mils
- **Material** CDA194
- **Surface** Bare copper on paddle
- **Process** Stamped
- **Lead Lock** No
- **Part Number** 101018
- **Treatment** Brown Oxide Treatment (BOT)

Wire:

- **Material** PdCu

Die Attach Epoxy:

- **Part Number** 8390A
- **Conductive** Yes

Mold Compound: G600V

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.
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 +25C and hot temp. (1 lot to be tested at 125C)	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. MSL-1 @ 260°C	231	15	1	246	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 to be tested at 125C)	77	5	1	82	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. Electrical test pre and post stress at +25°C	77	5	1	82	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
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