

# Product Change Notification - JAON-19VVRT417

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**Date:** 27 May 2015

**Product Category:** Touch Sensing Technologies; Analog (Thermal, Power Management & Safety); Analog (Linear & Mixed Signal) AND Interface; SMSC; 8-bit Microcontrollers; 16-bit Microcontrollers and Digital Signal Controllers

**Notification subject:** CCB 1592 Initial Notice: Qualification of Ag ring plated lead-frame and G700LS Mold Compound for 20L 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 Ag ring plated lead-frame and G700LS Mold Compound for 20L SSOP package at ANAP assembly site.

## **Pre Change:**

Using Spot Ag plated lead-frame and G600 mold compound.

## **Post Change:**

Using Ag ring plated lead-frame and G700LS mold compound.

**Impacts to Data Sheet:**

None

**Reason for Change:**

To improve productivity and qualify Ag ring plated lead-frame and G700LS mold compound.

**Change Implementation Status:**

In Progress

**Estimated First Ship Date:**

October 15, 2015 (date code: 1542)

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:**

**May 27, 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-19VVRT417\\_Qual\\_Plan.pdf](#) [PCN\\_JAON-19VVRT417\\_Affected\\_CPN.pdf](#) [PCN\\_JAON-19VVRT417\\_Affected\\_CPN.xls](#)

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PCN_JAON-19VVRT417
CATALOG_PART_NBR
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A010201T-I/SS
AR1100-I/SS
AR1100T-I/SS
CFPIC-I/SSC01
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HA0120T-I/SS
HA0140-I/SS
HA0140T-I/SS
HA1027-I/SS
HA1027T-I/SS
HA1030-I/SS
HA1030T-I/SS
HA1031-I/SS
HA1031T-I/SS
HA1218-I/SS
HA1515-I/SS
HA1515T-I/SS
HA2022-I/SS
HA2022T-I/SS
HA2525-I/SS
HA2525T-I/SS
HA2580-I/SS
HA2580T-I/SS
HA5288-I/SS
HA5288T-I/SS
HS12-100P0/12PS0F
HS12-100P0/12PS0FTR
HS12-100P0/12PS15
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MCP1631T-E/SS
MCP1631V-E/SS
MCP1631VT-E/SS
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MCP2140-I/SS
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RE265SS20T
RE350SS20T
RE352SS20T
RE46C800SS20
RE46C800SS20T
SW1100T-I/SS



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# **QUALIFICATION PLAN**

**PCN #: JAON-19VVRT417**

**Date:  
Apr 30, 2015**

**Qualification of Ag ring plated lead-frame and G700LS Mold Compound for 20L SSOP package at ANAP assembly site.**

Distribution

Fernando C	Greg P
Arthur N	Vassilis D
Joe F	Wichai K
Surasit P	Somnuek T.
Mitch R	Simeon Iliev
Chaweng W	Gerry O
Chalermpon P	Arnel M
Maitree Y	Atthapong W
Sunisa K	Supakorn L
Irina K	Ponpitug Y
Jeffrey J	Marco Ho
Rhoderick O	Fannie Lin

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Chacherngsao, Thailand, 24000  
Tel. (6638) 857119-45, 857311-19 ext. 1231  
Fax (6638) 857149-50

**Purpose:** \_\_\_\_\_ Qualification of Ag ring plated lead-frame and G700LS  
Mold Compound for 20L SSOP package at ANAP  
assembly site.

**MP code:** \_\_\_\_\_ DEBN17G3XAXF

**Part No.:** \_\_\_\_\_ PIC16F685-I/SS

**BD No:** \_\_\_\_\_ BDM-000751Rev.A

**CCB No.:** \_\_\_\_\_ 1592

**Package:**

**Type** \_\_\_\_\_ 20L SSOP

**Width or Size** \_\_\_\_\_ .209in

**Die thickness:** \_\_\_\_\_ 15 mils

**Die size:** \_\_\_\_\_ 86.3 x 97.5 mil

**MSL:** \_\_\_\_\_ MSL1 @260C

**Lead frame:**

**Paddle size:** \_\_\_\_\_ 126 x 169

**Material** \_\_\_\_\_ C194 with UDLF Strip

**Manufacturer** \_\_\_\_\_ QPL

**Surface** \_\_\_\_\_ Ring Ag Plated (Bare Cu on PAD &Ag on inner lead  
only)

**Process** \_\_\_\_\_ Etched

**Leadlock** \_\_\_\_\_ Yes

**Wire:**

**Material** \_\_\_\_\_ Au

**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.
Backward Solderability	JESD22B-102E; Perform 8 hours steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing.  Backward: Matte tin/ NiPdAu finish, SnPb solder, wetting temp 215°C for SMD.	22	5	1	27	> 95% lead coverage	5	
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.
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, 1lot 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.

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
HAST	+130°C/85% RH for 96 hours or 110°C/85%RH for 264 hours. Electrical test pre and post stress at +25°C and hot temp 125°C	77	5	3	246	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 or +110°C/85% RH for 264 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 cycles. Electrical test pre and post stress at hot temp 125°C; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.