

Product Change Notification - KSRA-13AJHF404

Date: 07 Mar 2017

Product Category: Capacitive Touch Sensors; 8-bit PIC Microcontrollers

Notification subject: CCB 2831 Initial Notice: Qualification of MMT as an additional assembly site and implement marking changes for selected Atmel products available in 14L SOIC package.

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:

CCB 2831 Initial Notice: Qualification of MMT as an additional assembly site and implement marking changes for selected Atmel products available in 14L SOIC package.

Pre Change:

Assembled at LPI assembly site with bottomside marking

Post Change:

Assembled at LPI assembly site or MMT assembly site with no bottomside marking.

Pre and Post Change Summary:

	Pre Change		Post Change	
Assembly Site	LPI assembly site	LPI assembly site	MMT assembly site	
Wire material	Au or CuPdAu wire	Au or CuPdAu wire	CuPdAu wire	
Die attach material	CRM-1033BF	CRM-1033BF	8390A	
Molding compound material	G600	G600	G600	
Lead frame material	A194	A194	A194	
Marking Format	<u>Topside</u> 1st Line: ATMEL, Date Code, MRL 2nd Line: MARK DEVICE 3rd Line: speed, Pkg, Class, Voltage <u>Bottomside</u> 1st Line: Lot No. 2nd Line: Mask ID, Die rev 3rd line: nGGG-aYYWW<BS1>eX n: Fab location code GGG: Country of assembly a: Assembly location code eX: e-code	<u>Topside</u> 1st Line: Device Type 2nd Line: Device Information 3rd Line: Triangle & YYWWNNN <u>Bottomside : None</u>	<u>Topside</u> 1st Line: Device Type 2nd Line: Device Information 3rd Line: Triangle & YYWWNNN <u>Bottomside : None</u>	
Top Mark	(see attachment for picture)	(see attachment for picture)	(see attachment for picture)	
	With bottomside Marking	No bottomside marking	No bottomside marking	

Bottom Mark	<i>(see attachment for picture)</i>	<i>(see attachment for picture)</i>	<i>(see attachment for picture)</i>
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Impacts to Data Sheet:
None

Reason for Change:
To improve productivity by qualifying MMT as an additional assembly site.

Change Implementation Status:
In Progress

Estimated Qualification Completion Date:

April 28, 2017

Note: Please be advised the qualification completion times may be extended because of unforeseen business conditions however implementation will not occur until after qualification has completed and a final PCN has been issued. The final PCN will include the qualification report and estimated first ship date.

Summary Table:

	January 2017					----->	April 2017				
	01	02	03	04	05		13	14	15	16	17
WW											
Initial PCN Issue Date				X							
Qual Report Availability											X
Final PCN Issue Date											X

Markings to Distinguish Revised from Unrevised Devices:
Traceability code and marking

Revision History:
January 26, 2016: Issued initial notification.
March 07, 2017: Re-issued initial notification to include marking changes and change EFSD to Estimated Qualification Completion Date. Added marking changes to improve traceability.

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_KSRA-13AJHF404_Affected CPN.pdf](#)
[PCN_KSRA-13AJHF404_Qual Plan.pdf](#)
[PCN_KSRA-13AJHF404_Attachment.pdf](#)
[PCN_KSRA-13AJHF404_Affected CPN.xlsx](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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Top Mark			
Bottom Mark	<p>With bottomside marking</p> 	<p>No bottomside marking</p> 	<p>No bottomside marking</p> 

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Affected Catalog Part Numbers (CPN)

PCN_KSRA-13AJHF404
CATALOG_PART_NBR
AT42QT1070-SSUR
AT42QT1070-SSUR852
ATTINY20-SSU
ATTINY20-SSUR
ATTINY20-SSUR704
ATTINY20-SSUR892
ATTINY20-SSUR988
ATTINY20-SSURA01
ATTINY20-SSURA87
ATTINY20-SSURB47
ATTINY24-20SSU
ATTINY24-20SSUR
ATTINY24A-SSF
ATTINY24A-SSFR
ATTINY24A-SSN
ATTINY24A-SSNR
ATTINY24A-SSU
ATTINY24A-SSUB65
ATTINY24A-SSUR
ATTINY24A-SSUR880
ATTINY24A-SSURA0
ATTINY24A-SSURB65
ATTINY24V-10SSU
ATTINY24V-10SSUR
ATTINY441-SSU
ATTINY441-SSUR
ATTINY44-20SSU
ATTINY44-20SSUR
ATTINY44-20SSURA0
ATTINY44A-SSF
ATTINY44A-SSFR
ATTINY44A-SSFRA1
ATTINY44A-SSN
ATTINY44A-SSNR
ATTINY44A-SSU
ATTINY44A-SSUR
ATTINY44A-SSUR569
ATTINY44A-SSUR625
ATTINY44A-SSURA0
ATTINY44A-SSURB09
ATTINY44V-10SSU
ATTINY44V-10SSUR
ATTINY44V-10SSURA2

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Affected Catalog Part Numbers (CPN)

PCN_KSRA-13AJHF404
CATALOG_PART_NBR
ATTINY841-SSU
ATTINY841-SSUR
ATTINY84-20SSU
ATTINY84-20SSUR
ATTINY84A-SSF
ATTINY84A-SSFA1
ATTINY84A-SSFR
ATTINY84A-SSFRA0
ATTINY84A-SSFRA1
ATTINY84A-SSU
ATTINY84A-SSU710
ATTINY84A-SSUR
ATTINY84V-10SSU
ATTINY84V-10SSUR



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QUALIFICATION PLAN SUMMARY

PCN #: KSRA-13AJHF404

Date:

Dec. 15, 2016

Qualification of MMT as an additional assembly site and implement marking changes for selected Atmel products available in 14L SOIC package.

Microchip Technology (Thailand) Co., Ltd.
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Fax (6638) 857149-50

Purpose: Qualification of MMT as an additional assembly site for selected Atmel products available in 14L SOIC package.

CCB No.: 2831

Misc.	Assembly site	MMT
	BD Number	BDM-001250 rev A / BDM-001249 rev A
	MP Code (MPC)	355B27D3XC03 / 354A07D3XC02
	Part Number (CPN)	ATTINY84-20SSU / ATTINY20-SSU
Lead-Frame	Paddle size	104x150 mils
	Material	A194
	Surface	Single Ring Bare Cu on paddle
	Treatment	BOT; Roughened Ag
	Process	Etched
	Lead-lock	No
	Lead Plating	Matte Tin
	LF Matrix (RowxColumn)	16x7; 112 pad/strip
	Strip test capable	Yes
Bond Wire	Material	CuPdAu
Die Attach	Part Number	8390A
	Conductive	Yes
MC	Part Number	G600V
PKG	PKG Type	SOIC
	Pin/Ball Count	14
	PKG width/size	150 mils
Die	Die Thickness	15 mils
	Die Size	97.20x96.40 mils

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	J-STD-002; 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	J-STD-002; 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		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. Electrical test pre and post stress at +25°C and hot temp.85°C. 1 lot to be tested at 125C	45	5	1	50	0	25	For hot temp testing, pre/post test 1 lot at 85°C and 125°C (if applicable)

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
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 hours. Electrical test pre and post stress at +25°C and hot temp. Extend HAST to 192 hrs post stress test at 25C. 1 lot to be tested at 125C	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. 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; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress. Extend temp cycle to 1000 cycle post stress test at 25°C. 1 lot to be tested at 125C	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.