



Product Change Notification - JAON-22XFVI227

Date:

22 Jul 2019

Product Category:

32-bit Microcontrollers; Touchscreen Controllers; Others

Affected CPNs:**Notification subject:**

CCB 3871 Initial Notice: Qualification of MMT as an additional assembly site for selected Atmel products of 58.85K wafer technology available in 100L TQFP (14x14x1.0 mm) package.

Notification text:**PCN Status:**

Initial notification

PCN Type:

Manufacturing Change

Microchip Parts Affected:

Please open one of the icons found in the Affected CPNs section above.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

Description of Change:

Qualification of MMT as an additional assembly site for selected Atmel products of 58.85K wafer technology available in 100L TQFP (14x14x1.0 mm) package.

Pre Change:

Assembled at ASE assembly site using Au bond wire, CRM-1076WA die attach, G631H molding compound, C7025 lead frame material or assembled at ANAP using AuPd bond wire, 3230 die attach, G700 mold compound and C194 lead frame material.

Post Change:

Assembled at ASE assembly site using Au bond wire, CRM-1076WA die attach, G631H molding compound, C7025 lead frame material or assembled at ANAP using AuPd bond wire, 3230 die attach, G700 mold compound and C194 lead frame material or assembled at MMT using Au bond wire, 3280 die attach material, G700 mold compound and C7025 lead frame material.

Pre and Post Change Summary:

	Pre Change		Post Change		
Assembly Site	Advanced Semiconductor Engineering, Inc. (ASE)	Amkor Technology Philippine (P1/P2), INC. (ANAP)	Advanced Semiconductor Engineering, Inc. (ASE)	Amkor Technology Philippine (P1/P2), INC. (ANAP)	Microchip Technology Thailand (MMT)
Wire material	Au	AuPd	Au	AuPd	Au
Die attach material	CRM-1076WA	3230	CRM-1076WA	3230	3280
Molding compound material	G631H	G700	G631H	G700	G700
Lead frame material	C7025	C194	C7025	C194	C7025
MSL Level	MSL 3	MSL 3	MSL 3	MSL 3	MSL 1
Tray Info	Bakeable Tray	Bakeable Tray	Bakeable Tray	Bakeable Tray	Non-Bakeable Tray

Impacts to Data Sheet:

None.

Change Impact:

None.

Reason for Change:

To improve manufacturability and on-time delivery by qualifying MMT as an additional assembly site.

Change Implementation Status:

In Progress

Estimated Qualification Completion Date:

September 2019

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. Also note that after the estimated first ship date guided in the final PCN customers may receive pre and post change parts.

Time Table Summary:

	July 2019					-->	September 2019				
	Workweek	27	28	29	30		31	36	37	38	39
Initial PCN Issue Date				X							
Qual Report Availability							X				
Final PCN Issue Date							X				

Method to Identify Change:

Traceability code

Qualification Plan:

Please open the attachments included with this PCN labeled as PCN_#_Qual_Plan.

Revision History:

July 22, 2019: 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-22XFVI227_Qual_Plan.pdf](#)

[PCN_JAON-22XFVI227_TRAY PRE AND POST CHANGE_CCB 3871.pdf](#)

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

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make the applicable selections.

Affected Catalog Part Numbers (CPN)

AT32UC3C1128C-AUR
AT32UC3C1128C-AUT
AT32UC3C1256C-AUR
AT32UC3C1256C-AURA0
AT32UC3C1256C-AUT
AT32UC3C1256C-AZR
AT32UC3C1256C-AZT
AT32UC3C1512C-AUR
AT32UC3C1512C-AUT
AT32UC3C1512C-AZR
AT32UC3C1512C-AZT
AT32UC3C164C-AUR
AT32UC3C164C-AUT
ATMXT3432S-M-AT
ATMXT3432S-M-ATR
ATMXT540E-AB
ATMXT540E-ABR
ATMXT540E-AT
ATMXT540E-ATR
ATMXT768E-AB
ATMXT768E-ABR
ATMXT768E-AT
ATMXT768E-ATR
ATMXT768EC06-AB
ATMXT768EC06-ABR
ATUC3T-ATR



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QUALIFICATION PLAN SUMMARY

PCN #: JAON-22XFVI227

**Date:
June 27, 2019**

Qualification of MMT as an additional assembly site for selected Atmel products of 58.85K wafer technology available in 100L TQFP (14x14x1.0 mm) package.

Purpose: Qualification of MMT as an additional assembly site for selected Atmel products of 58.85K wafer technology available in 100L TQFP (14x14x1.0 mm) package.

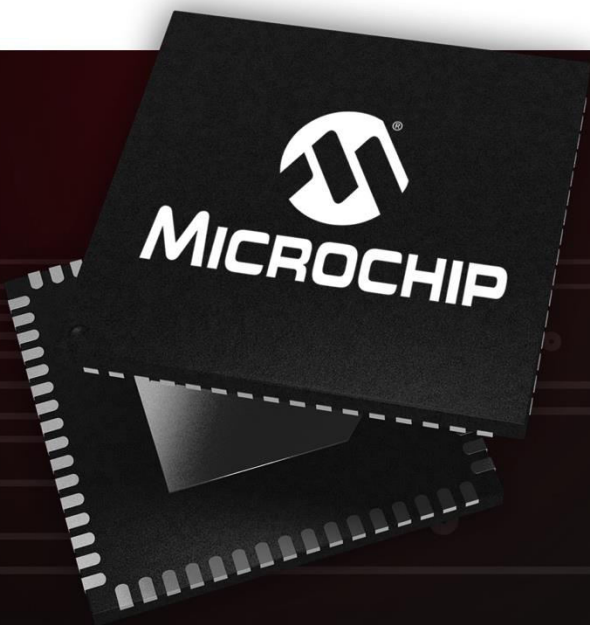
<u>Misc.</u>	Assembly site	MMT
	BD Number	BDM-001880/B
	MP Code (MPC)	58U94YE5XC02
	Part Number (CPN)	AT32UC3C1256C-AZT
	MSL information	MSL-1
	Assembly Shipping Media (T/R, Tube/Tray)	Tray (Non-bakeable)
	Base Quantity Multiple (BQM)	90units/tray
	Reliability Site	MPHL
	CCB No.	3871
<u>Lead-Frame</u>	Paddle size	280x280 mils
	Material	C7025
	DAP Surface Prep	Bare Cu
	Treatment	BOT
	Process	Stamped
	Lead-lock	No
	Part Number	10110005
	Lead Plating	Matte Tin
	Strip Size	70x250mm
	Strip Density	30 units/strip
<u>Bond Wire</u>	Material	Au
<u>Die Attach</u>	Part Number	3280
	Conductive	Yes
<u>MC</u>	Part Number	G700HA
<u>PKG</u>	PKG Type	TQFP
	Pin/Ball Count	100
	PKG width/size	14x14x1.0mm
<u>Die</u>	Die Thickness	11 mils
	Die Size	233.2x211.7 mils
	Fab Process (site)	58.85K/UMC

Test Name	Conditions	Reliability Stress Read Point Grade 1: -40°C to +125°C (MCHP E Temp)	Pre & Post Reliability Stress Test Temperature Grade 1: -40°C to +125°C (MCHP E Temp)	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Test Site	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	MPHL	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	MPHL	
Wire Bond Pull - WBP	Mil. Std. 883-2011			5	0	3	15	0 fails after TC	5	MMT/MPHL	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001			5	0	3	15	0	5	MMT/MPHL	30 bonds from a minimum of 5 devices.
Physical Dimensions	Measure per JESD22 B100 and B108			10	0	3	30	0	5	MMT	
External Visual	Mil. Std. 883-2009/2010			All devices prior to submission for qualification testing	0	3	ALL	0	5	MMT/MPHL	
HTSL (High Temp Storage Life)	JESD22-A103 +175°C	Grade 1: 500 hrs (+175°C)	Grade 1: +25°C, +85°C, +125°C	45	5	1	50	0	25	MPHL	Spares should be properly identified.

Test Name	Conditions	Reliability Stress Read Point Grade 1: -40°C to +125°C (MCHP E Temp)	Pre & Post Reliability Stress Test Temperature Grade 1: -40°C to +125°C (MCHP E Temp)	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Test Site	Special Instructions
Preconditioning - Required for surface mount devices	J-STD-020 JESD22-A113 +150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020E for package type. MSL1 @ 260°C		Grade 1: +25°C	231	15	3	381	0	15	MPHL	Spares should be properly identified.
HAST	'JESD22-A101 or A110 +130°C/85% RH for 96 hrs	Grade 1: 96 hrs (+130°C/85% RH)	Grade 1: +25°C, +85°C, +125°C	77	5	3	246	0	10	MPHL	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Unbiased HAST	JESD22-A102, A118, or A101 +130°C/85% RH for 96 hrs	Grade 1: 96 hrs (+130°C/85% RH)	Grade 1: +25°C	77	5	3	246	0	10	MPHL	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	'JESD22-A104 and Appendix 3 -65°C to +150°C	Grade 1:500 cycles (-65°C to 150°C)	Grade 1: +85°C, +125°C	77	5	3	246	0	15	MPHL	Spares should be properly identified.



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PCN # JAON-22XFVI227

CCB 3871 Tray Pre and Post Changes Summary

Tray Comparison

PRE CHANGE

ASE/ANAP



MSL 3 Tray Bakeable

Tray dimension: No change
 Total Tray Length: 322.6mm
 Total Tray Width: 135.9mm
 Total tray thickness: 7.62mm

POST CHANGE

MTAI



MSL 1 Tray Non-Bakeable

Tray dimension: No Change
 Total Tray Length: 322.6mm
 Total Tray Width: 135.9mm
 Total tray thickness: 7.62mm