



Product Change Notification / MAAN-12VZWI574

Date:

14-Dec-2023

Product Category:

8-bit Microcontrollers

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6731 Initial Notice: Qualification of MP3A as an additional assembly site for selected ATTINY406, ATTINY416, ATTINY426, ATTINY806, ATTINY816, ATTINY826, ATTINY1606, ATTINY1616, ATTINY1626, ATTINY3226, and AVR16EB20 device families available in 20L VQFN (3x3x0.9mm) package.

Affected CPNs:

[MAAN-12VZWI574_Affected_CPN_12142023.pdf](#)

[MAAN-12VZWI574_Affected_CPN_12142023.csv](#)

Notification Text:

PCN Status:Initial Notification

PCN Type:Manufacturing Change

Microchip Parts Affected:Please open one of the files found in the Affected CPNs section.

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

Description of Change:Qualification of MP3A as an additional assembly site for selected ATTINY406, ATTINY416, ATTINY426, ATTINY806, ATTINY816, ATTINY826, ATTINY1606, ATTINY1616, ATTINY1626, ATTINY3226, and AVR16EB20 device families available in 20L VQFN (3x3x0.9mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change	
Assembly Site	Microchip Technology Thailand (MTAI)	Microchip Technology Thailand (MTAI)	Microchip Technology Inc. (MPHIL-3) (MP3A)
Wire Material	Au	Au	Au
Die Attach Material	8006NS	8006NS	8006NS
Molding Compound Material	G700LTD	G700LTD	G700LTD
Lead-Frame Material	C194	C194	C194

Impacts to Data Sheet:None

Change Impact:None

Reason for Change:To improve on-time delivery performance by qualifying MP3A as an additional assembly site.

Change Implementation Status:In Progress

Estimated Qualification Completion Date:February 2024

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:

	December 2023					>	February 2024				
Workweek	4 8	4 9	5 0	5 1	5 2		05	06	07	08	09
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:December 14, 2023: 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.

Attachments:

[PCN_MAAN-12VZWI574_Qual Plan.pdf](#)

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

Terms and Conditions:

If you wish to receive Microchip PCNs via email please register for our PCN email service at our [PCN home page](#) select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the [PCN FAQ](#) section.

If you wish to change your PCN profile, including opt out, please go to the [PCN home page](#) select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

Affected Catalog Part Numbers (CPN)

ATTINY1616-MF
ATTINY1616-MN
ATTINY416-MF
ATTINY406-MF
ATTINY406-MN
ATTINY416-MN
ATTINY806-MNRA1
ATTINY416-MNRPE
ATTINY1606-MF
ATTINY406-MFR
ATTINY416-MFR
ATTINY406-MNR
ATTINY416-MNR
ATTINY1616-MNRA1
ATTINY1616-MNR
ATTINY1616-MFR
ATTINY806-MF
ATTINY806-MN
ATTINY1606-MN
ATTINY1626-MF
ATTINY1626-MU
ATTINY1626-MUR
ATTINY1626-MFR
ATTINY3226-MF
ATTINY3226-MU
ATTINY3226-MFR
ATTINY426-MF
ATTINY826-MF
ATTINY426-MU
ATTINY826-MU
ATTINY426-MUR
ATTINY826-MUR
ATTINY426-MFR
ATTINY826-MFR
ATTINY1616-MNRA2
ATTINY3226-MUR
ATTINY816-MF
ATTINY816-MN
ATTINY816-MNR
ATTINY816-MFR
ATTINY1606-MNR
ATTINY806-MNR
ATTINY1606-MFR
ATTINY806-MFR
AVR16EB20-E/REB
AVR16EB20-I/REB

MAAN-12VZWI574 - CCB 6731 Initial Notice: Qualification of MP3A as an additional assembly site for selected ATTINY406, ATTINY416, ATTINY426, ATTINY806, ATTINY816, ATTINY826, ATTINY1606, ATTINY1616, ATTINY1626, ATTINY3226, and AVR16EB20 device families available in 20L VQFN (3x3x0.9mm) package.

~~AVR16EB20T-E/REB~~

AVR16EB20T-E/REB



QUALIFICATION PLAN SUMMARY

RELIABILITY LABORATORY

PCN #: MAAN-12VZWI574

Date:
December 7, 2023

**Qualification of MP3A as an additional assembly site for selected
ATTINY406, ATTINY416, ATTINY426, ATTINY806, ATTINY816,
ATTINY826, ATTINY1606, ATTINY1616, ATTINY1626, ATTINY3226,
and AVR16EB20 device families available in 20L VQFN
(3x3x0.9mm) package.**

Purpose: Qualification of MP3A as an additional assembly site for selected ATTINY406, ATTINY416, ATTINY426, ATTINY806, ATTINY816, ATTINY826, ATTINY1606, ATTINY1616, ATTINY1626, ATTINY3226, and AVR16EB20 device families available in 20L VQFN (3x3x0.9mm) package.

CCB No.: 6731

<u>Misc.</u>	Assembly site	MP3A
	BD Number	BD-001943/01
	MP Code (MPC)	59B174RLBA01
	Part Number (CPN)	ATTINY3217-MF
	MSL information	MSL-1/260
	Assembly Shipping Media (T/R, Tube/Tray)	TRAY
	Base Quantity Multiple (BQM)	490
	Reliability Site	MPHIL
<u>Lead-Frame</u>	Paddle size	114 x 114 mils
	Material	C194
	DAP Surface Prep	Ag selective plated
	Treatment	Yes
	Process	Etched
	Lead-lock	No
	Part Number	10102401
	Lead Plating	Matte Tin
	Strip Size	70 x 250 mm
	Strip Density	700 units/strip
<u>Bond Wire</u>	Material	Au
<u>Die Attach</u>	Part Number	3280
	Conductive	Yes
<u>MC</u>	Part Number	G700LTD
<u>PKG</u>	Package Type	VQFN
	Pin/Ball Count	24
	PKG width/size	4x4x0.9 mm

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	ATE Test Site	REL Test Site	Special Instructions
Standard Pb-free Solderability	J-STD-002D ; 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	MPHIL	MPHIL	Standard Pb-free solderability is the requirement.
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5			30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5			30 bonds from a min. 5 devices.
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			
Preconditioning - Required for surface mount devices	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; Electrical test pre and post stress at +25°C. MSL1/260	231	15	3	738	0	15	MPHIL	MPHIL	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
HAST	JESD22-A110. +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 85C.	77	5	3	246	0	10	MPHIL	MPHIL	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UHAST	JESD22-A118. +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	MPHIL	MPHIL	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22-A104. -65°C to +150°C for 500 cycles. Electrical test pre and post stress at hot temp 85C; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	MPHIL	MPHIL	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.