



Product Change Notification: MAAN-27WMLJ297

Date:

30-Oct-2024

Product Category:

Switching Regulators

Notification Subject:

CCB 7227 Initial Notice: Qualification of ATP7 as an additional assembly site for selected MCP16411, MCP16412, MCP16413, MCP16414, MCP16415, MCP16416, MCP16417 and MCP16418 device families available in 10L TDFN (3x3x0.8mm) package.

Affected CPNs:

[MAAN-27WMLJ297_Affected_CPN_10302024.pdf](#)

[MAAN-27WMLJ297_Affected_CPN_10302024.csv](#)

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 ATP7 as an additional assembly site for selected MCP16411, MCP16412, MCP16413, MCP16414, MCP16415, MCP16416, MCP16417 and MCP16418 device families available in 10L TDFN (3x3x0.8mm) package.

Pre and Post Summary Changes:

	Pre Change	Post Change	
Assembly Site	Amkor Assembly & Test (Shanghai) Co., LTD. (ANAC)	Amkor Assembly & Test (Shanghai) Co., LTD. (ANAC)	Amkor Technology Philippines (P3/P4), INC. (ATP7)

Method to Identify Change: Traceability Code

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

Revision History: October 30, 2024: Issued initial notification.

Note: The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable product.

Attachments:

PCN_MAAN-27WMLJ297 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)

MCP16411-I/MN
MCP16412-I/MN
MCP16413-I/MN
MCP16414-I/MN
MCP16411T-I/MN
MCP16412T-I/MN
MCP16413T-I/MN
MCP16414T-I/MN
MCP16415-I/MN
MCP16416-I/MN
MCP16417-I/MN
MCP16418-I/MN
MCP16415T-I/MN
MCP16416T-I/MN
MCP16417T-I/MN
MCP16418T-I/MN



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QUALIFICATION PLAN SUMMARY

PCN #: MAAN-27WMLJ297

Date:

October 24, 2024

**Qualification of ATP7 as an additional assembly site for selected
MCP16411, MCP16412, MCP16413, MCP16414, MCP16415,
MCP16416, MCP16417 and MCP16418 device families available in
10L TDFN (3x3x0.8mm) package.**

Purpose: Qualification of ATP7 as an additional assembly site for selected MCP16411, MCP16412, MCP16413, MCP16414, MCP16415, MCP16416, MCP16417 and MCP16418 device families available in 10L TDFN (3x3x0.8mm) package.

CCB No.: 7227

<u>Misc.</u>	Assembly site	ATP7
	BD Number	BD-002720-01
	MP Code (MPC)	VA8A1TQAXA00
	Part Number (CPN)	MCP16411T-I/MN
	MSL information	MSL1, 260'C
	Assembly Shipping Media (T/R, Tube/Tray)	Tube
	Base Quantity Multiple (BQM)	120, 3300
	Reliability Site	MTAI
<u>Lead-Frame</u>	Paddle size	75x106mils
	Material	C194
	DAP Surface Prep	Double Ring Ag
	Treatment	Rough
	Process	Etch
	Lead-lock	No
	Part Number	101383221
	Lead Plating	MatteSn
	Strip Size	250x70
	Strip Density	1224
<u>Bond Wire</u>	Material	Au
<u>Die Attach</u>	Part Number	CRM-1085A
	Conductive	Yes
<u>MC</u>	Part Number	G631BQF
<u>PKG</u>	Package Type	TDFN
	Pin/Ball Count	10
	PKG width/size	3x3x0.8mm

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	MTAI	MTAI	Standard Pb-free solderability is the requirement.
Backward Solderability	J-STD-002D ;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	MTAI	MTAI	SnPb solderability (backward solderability- SMD reflow soldering) is required for any plating related changes and highly recommended for other package BOM changes.
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5	ATP7	ATP7	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5	ATP7	ATP7	30 bonds from a min. 5 devices.
Wire Sweep								ATP7	ATP7	Required for any reduction in wire bond thickness.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5	ATP7	ATP7	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MTAI	MTAI	
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. MSL 1, 260°C	231	15	3	738	0	15	MTAI	MTAI	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 +85°C.	77	5	3	246	0	10	MTAI	MTAI	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	MTAI	MTAI	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 +85°C; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	MTAI	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.