



## Product Change Notification / JAON-23VTYQ024

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**Date:**

26-Mar-2021

**Product Category:**

PoE PSE

**PCN Type:**

Manufacturing Change

**Notification Subject:**

CCB 4611 Initial Notice: Qualification of MMT as an additional assembly site for selected Microsemi PD69101ILQ-TR and PD69101ILQ-13155TR catalog part numbers (CPN) available in 24L VQFN (4x5x1.0mm) package.

**Affected CPNs:**

[JAON-23VTYQ024\\_Affected\\_CPN\\_03262021.pdf](#)

[JAON-23VTYQ024\\_Affected\\_CPN\\_03262021.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 MMT as an additional assembly site for selected Microsemi PD69101ILQ-TR and PD69101ILQ-13155TR catalog part numbers (CPN) available in 24L VQFN (4x5x1.0mm) package.

**Pre and Post Change Summary:**

	Pre Change		Post Change		
Assembly Site	Unisem Chengdu	UTAC Thai	Unisem Chengdu	UTAC Thai	Microchip Technology

	Co.,Ltd (UNIC)	Limited (UTL-1) LTD. (NSEB)	Co.,Ltd (UNIC)	Limited (UTL-1) LTD. (NSEB)	Thailand (Branch) (MMT)
<b>Bond Wire material</b>	Au	CuPdAu	Au	CuPdAu	CuPdAu
<b>Die Attach material</b>	8290	8600	8290	8600	3280
<b>Mold compound material</b>	G770HP	G700LTD	G770HP	G700LTD	G700LTD
<b>Lead frame material</b>	A194	EFTEC-64T	A194	EFTEC-64T	A194
<b>Lead frame lead lock</b>	No	Yes	No	Yes	Yes
	See attached pre and post change comparison				

**Impacts to Data Sheet:** None

**Change Impact:**None

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

**Change Implementation Status:**In Progress

**Estimated Qualification Completion Date:**July 2021

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:**

	March 2021					->	July 2021				
	10	11	12	13	14		27	28	29	30	31
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:**March 26, 2021: 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\\_JAON-23VTYQ024\\_Qual\\_Plan.pdf](#)

[PCN\\_JAON-23VTYQ024\\_Pre and Post Change\\_Summary.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.

# CCB 4611

## Pre and Post Change Summary

### PCN # JAON-23VTYQ024



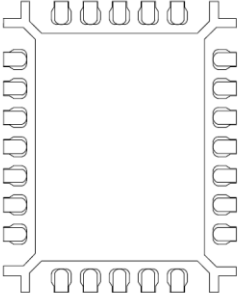
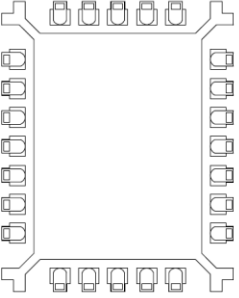
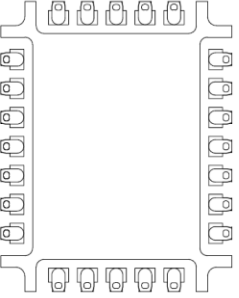
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# Lead frame Comparison

Pre Change		Post Change
UNIC	NSEB	MMT
<p>UNIC LF</p>  <p>The UNIC LF lead frame diagram shows a square package with leads on all four sides. The top and bottom edges have 10 leads each, while the left and right edges have 8 leads each. The leads are arranged in a regular grid pattern.</p>	<p>NSEB LF</p>  <p>The NSEB LF lead frame diagram shows a square package with leads on all four sides. The top and bottom edges have 10 leads each, while the left and right edges have 8 leads each. The leads are arranged in a regular grid pattern.</p>	<p>MMT LF</p>  <p>The MMT LF lead frame diagram shows a square package with leads on all four sides. The top and bottom edges have 10 leads each, while the left and right edges have 8 leads each. The leads are arranged in a regular grid pattern.</p>



**MICROCHIP**

## **QUALIFICATION PLAN SUMMARY**

**PCN # JAON-23VTYQ024**

**Date**

**March 18, 2021**

**Qualification of MMT as an additional assembly site for selected Microsemi PD69101ILQ-TR and PD69101ILQ-13155TR catalog part numbers (CPN) available in 24L VQFN (4x5x1.0mm) package.**

**Purpose:** Qualification of MMT as an additional assembly site for selected Microsemi PD69101ILQ-TR and PD69101ILQ-13155TR catalog part numbers (CPN) available in 24L VQFN (4x5x1.0mm) package.

**CCB No.:** 4611

<b><u>Misc.</u></b>	Assembly site	MMT
	BD Number	BDM-002819/B
	MP Code (MPC)	U0151Q5FCA01
	Part Number (CPN)	PD69101ILQ-13155TR
	MSL information	MSL-3/260
	Assembly Shipping Media (T/R, Tube/Tray)	TnR
	Base Quantity Multiple (BQM)	3000
	Reliability Site	MTAI
<b><u>Lead-Frame</u></b>	Paddle size	114x154 mils
	Material	A194
	DAP Surface Prep	Bare Cu
	Treatment	BOT
	Process	Etched
	Lead-lock	Yes
	Part Number	10102405
	Lead Plating	Matte Tin
	Strip Size	250x70 mm
	Strip Density	550 units/strip
<b><u>Bond Wire</u></b>	Material	CuPdAu
<b><u>Die Attach</u></b>	Part Number	3280
	Conductive	Yes
<b><u>MC</u></b>	Part Number	G700LTD
<b><u>PKG</u></b>	PKG Type	VQFN
	Pin/Ball Count	24
	PKG width/size	4x5x1.0mm

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	Test Site	Special Instructions
<b>Standard Pb-free Solderability</b>	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.
<b>Wire Bond Pull - WBP</b>	Mil. Std. 883-2011	5	0	3	15	0 fails after TC	5	MMT/MTAI	30 bonds from a minimum of 5 devices.
<b>Wire Bond Shear - WBS</b>	CDF-AEC-Q100-001	5	0	3	15		5	MMT/MTAI	30 bonds from a minimum of 5 devices.
<b>Wire Sweep</b>		5	0	3	15	0		MMT	Required for any reduction in wire bond thickness.
<b>Physical Dimensions</b>	Measure per JESD22 B100 and B108	10	0	3	30	0	5	MMT	
<b>External Visual</b>	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MMT/ MTAI	
<b>HTSL (High Temp Storage Life)</b>	+175 C for 504 hours. Electrical test pre and post stress at +25°C and hot temp.  - Use the parts which have gone through Pre-conditioning	15	5	3	50	0	25	MTAI	



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	Test Site	Special Instructions
<b>Preconditioning - Required for surface mount devices</b>	+150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per <b>Jedec-STD-020E</b> for package type; Electrical test pre and post stress at +25°C. <b>MSL-3/260C</b>	231 +15 (required for HTSL)	15 +5(required for HTSL)	3	738 +45	0	15	MTAI	Spares should be properly identified. 77 parts from each lot to be used for HAST, Autoclave, Temp Cycle test.
<b>HAST</b>	+130°C/85% RH for 96 hours. Electrical test pre and post stress at +25°C and hot temp. Extend to 192 hrs post test at 25C	77	5	3	246	0	10	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
<b>Unbiased HAST</b>	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at +25°C. Extend to 192 hrs post test at 25C	77	5	3	246	0	10	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
<b>Temp Cycle</b>	-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 to 1000 cycle post test at 25C	77	5	3	246	0	15	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

Affected Catalog Part Numbers (CPN)

PD69101ILQ-13155TR

PD69101ILQ-TR