



Product Change Notification / GBNG-08VOOS770

Date:

10-Nov-2020

Product Category:

16-Bit - Microcontrollers and Digital Signal Controllers

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4131.001 Final Notice: Qualification of MTAI as a new assembly site for selected PIC24FJ128GL305 and PIC24FJ64GL305 device families available in 48L TQFP (7x7x1mm) package.

Affected CPNs:

[GBNG-08VOOS770_Affected_CPN_11102020.pdf](#)

[GBNG-08VOOS770_Affected_CPN_11102020.csv](#)

Notification Text:

PCN Status: Final 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 MTAI as a new assembly site for selected PIC24FJ128GL305 and PIC24FJ64GL305 device families available in 48L TQFP (7x7x1mm) package.

Pre Change:

Assembled at ANAP assembly site with MSL 3 classification using AP4200 die attach, G631HQ mold compound, C194 lead frame, 161x161 mils paddle size.

Post Change:

Assembled at MTAI assembly site with MSL 1 classification using 3280 die attach, G700HA mold compound, C7025 lead frame, 200x200 mils paddle size.

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	Amkor Technology Philippine (P1/P2), INC. / (ANAP)	Microchip Technology Thailand (HQ) (MTAI)
Wire material	Au	Au
Die attach material	AP4200	3280
Molding compound material	G631HQ	G700HA
Lead frame	Material	C194
	Paddle size	161x161 mils
	Design	Please see attached Pre and Post Change summary.
MSL Classification	MSL 3	MSL 1

Impacts to Data Sheet: None

Change Impact:

None

Reason for Change:

To improve productivity and on-time delivery performance by qualifying MTAI as a new assembly site.

Change Implementation Status:

In Progress

Estimated First Ship Date:

December 4, 2020 (date code: 2049)

NOTE: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Time Table Summary:

	November 2020				December 2020				
Workweek	45	46	47	48	49	50	51	52	53
Qual Report Availability		X							
Final PCN Issue Date		X							
Estimated Implementation Date					X				

Method to Identify Change:

Traceability code

Qualification Report:

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

Revision History:

November 10, 2020: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on December 4, 2020

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

Attachments:

[PCN_GBNG-08VOOS770_Pre and Post Change Summary.pdf](#)
[PCN_GBNG-08VOOS770_Qual_Report.pdf](#)

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

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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)

PIC24FJ128GL305-E/PT

PIC24FJ64GL305-E/PT

PIC24FJ128GL305-I/PT

PIC24FJ64GL305-I/PT

PIC24FJ128GL305T-I/PT

PIC24FJ64GL305T-I/PT

PRE AND POST CHANGE SUMMARY

CCB 4131.001

PCN #: GBNG-08VOOS770



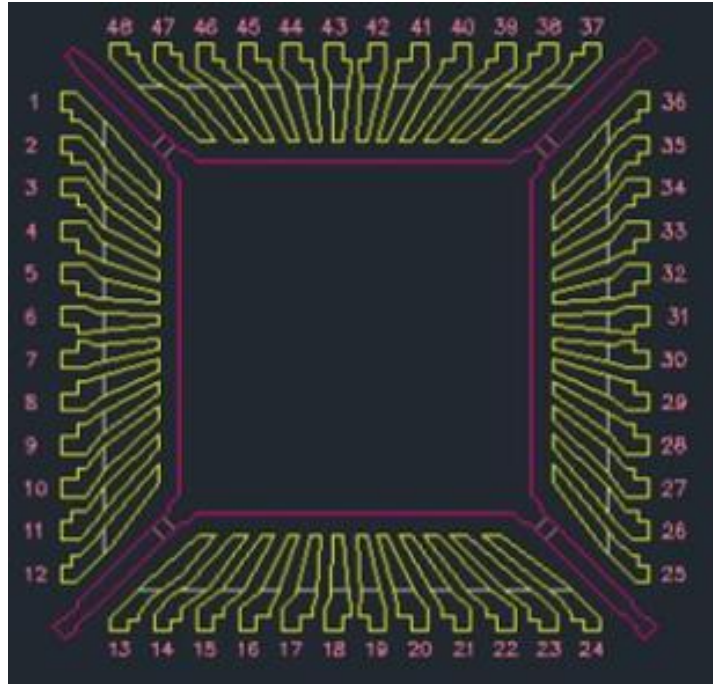
A Leading Provider of Smart, Connected and Secure Embedded Control Solutions



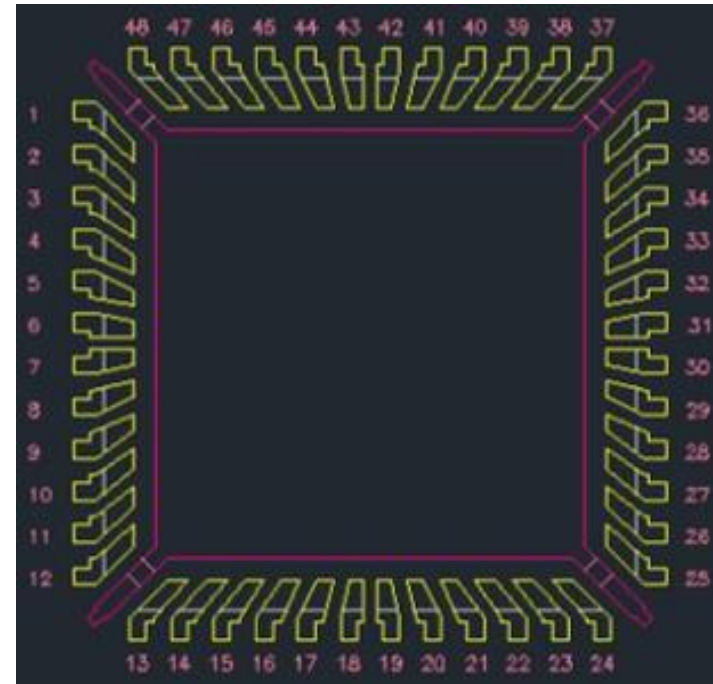
SMART | CONNECTED | SECURE

Lead Frame Comparison

Pre Change



Post Change





QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: GBNG-08VOOS770

Date
September 14, 2015

Qualification of MTAI as a new assembly site for selected products available in 100L TQFP (12x12x1.0mm) package.

The selected PIC24FJ128GL305 and PIC24FJ64GL305 device families available in 48L TQFP (7x7x1mm) package will qualify by similarity (QBS).



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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of MTAI as a new assembly site for selected products available in 100L TQFP (12x12x1.0mm) package. The selected PIC24FJ128GL305 and PIC24FJ64GL305 device families available in 48L TQFP (7x7x1mm) package will qualify by similarity (QBS).
CCB No.	1438, 4131, 4131.001
CN	BC151641
QUAL ID	Q15097 Rev A.
MP CODE	SAAA17V7XEXF
Part No.	PIC24FJ1024GB610-I/PT
Bonding No.	BDE-002698 Rev. 03
<u>Package</u>	
Type	100L TQFP
Package size	12x12x1.0 mm
<u>Lead Frame</u>	
Paddle size	240 x 240 mils
Material	C7025
Surface	Bare copper on paddle
Process	Stamp
Lead Lock	No
Part Number	10110002
Treatment	Brown Oxide Treatment (BOT)
<u>Die attach material</u>	
Epoxy	3280
Wire	Au wire
Mold Compound	G700HA
Plating Composition	Matte Tin

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MTAI161603210.000	SCB1916096510.112	1529YHW
MTAI161603247.000	SCB1916096510.112	1529YRW
MTAI161700260.000	SCB1916096510.112	1530YSP

Result Pass Fail _____

100L TQFP (12x12x1.0 mm) assembled by MTAI pass reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020D)	IPC/JEDEC C J-STD- 020D	135	0/135	Pass	

<u>Precondition Prior Perform Reliability Tests</u> (At MSL Level 1)	Electrical Test: +25°C and 85°C System: J750	JESD22- A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE			693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test: +25°C and 85°C System: J750			0/693		

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	Stress Condition: -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H	JESD22- A104		231		Parts had been pre-conditioned at 260°C 77 units / lot
	Electrical Test: + 85°C System: J750		231(0)	0/231	Pass	
	Bond Strength: Wire Pull (> 2.5 grams) Bond Shear (>15.00 grams)		15 (0)	0/15	Pass	
			15 (0)	0/15	Pass	
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22- A118		231		Parts had been pre-conditioned at 260°C 77 units / lot
	Electrical Test: +25°C System: J750		231(0)	0/231	Pass	
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 2.5 Volts System: HAST 6000X	JESD22- A110		231		Parts had been pre-conditioned at 260°C 77 units / lot
	Electrical Test: +25°C and 85°C System: J750		231(0)	0/231	Pass	
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB	JESD22- A103		45		45 units
	Electrical Test : +25°C and 85°C System: J750		45(0)	0/45	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Bond Strength	Wire Pull (> 2.5 grams)	M2011	30 (0) Wires	0/30	Pass	
Data Assembly	Bond Shear (>15.00 grams)	JESD22- B116	30 (0) bonds	0/30	Pass	