Product Change Notification / MFOL-10XVVK480

Date:

16-May-2022

Product Category:

32-bit Microcontrollers

PCN Type:

Manufacturing Change

Notification Subject:

CCB 3947.001 Final Notice: Qualification of MMT as an additional assembly site for selected PIC32MM00xx device family available in 20L QFN (4x4x0.9mm) package.

Affected CPNs:

MFOL-10XVVK480_Affected_CPN_05162022.pdf
MFOL-10XVVK480_Affected_CPN_05162022.csv

Notification Text:

PCN Status: Final 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 PIC32MM00xx device family available in 20L QFN (4x4x0.9mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change

Assembly Site	UTAC Thai Limited (UTL-1) LTD. (NSEB)	UTAC Thai Limited (UTL-1) LTD. (NSEB)	Microchip Technology Thailand (Branch) (MMT)
Wire Material	Au	Au	Au
Die Attach Material	8600	8600	3280
Molding Compound Material	G700LTD	G700LTD	G700LTD
Lead-Frame Material	EFTEC-64T	EFTEC-64T	A194
Lead-Frame Paddle Size	114 x 114 mils	114 x 114 mils	114 x 114 mils
DAP Surface Prep	Ag ring plating	Ag ring plating	Bare Cu
	See Pre and Post change comparison.		

Impacts to Data Sheet: None

Change Impact: None
Reason for Change: To improve productivity by qualifying MMT as an additional assembly site.

Change Implementation Status: In Progress

Estimated First Ship Date: June 10, 2022 (date code: 2224)

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

Time Table Summary:

	May 2022				**June 2022**				
Workweek	19	20	21	22	23	24	25	26	27
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:May 16, 2022: Issued final 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_MFOL-10XVVK480_Pre and Post Change Summary.pdf
PCN_MFOL-10XVVK480_Qual Report.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.

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QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: MFOL-10XVVK480

Date:
March 31, 2020

Qualification of MMT as an additional assembly site for selected PIC32MM00xx device family available in 20L QFN (4x4x0.9mm) package. This is a qualification by similarity (QBS) and a Q100 grade 1 qualification.

PACKAGE QUALIFICATION REPORT

Purpose	**Qualification of MMT as an additional assembly site for selected PIC32MM00xx device family available in 20L QFN (4x4x0.9mm) package. This is a qualification by similarity (QBS) and a Q100 grade 1 qualification.**
CN	ES334449
QUAL ID	Q20009 Rev A
MP CODE	SAAA14R4XAXF
Part No.	PIC24FJ1024GA606-E/MR
Bonding No.	BDE-005809 Rev. 02
CCB No.	3947 and 3947.001
Package	
Type	64L QFN
Package size	9 x 9 x 0.9 mm
Lead Frame	
Paddle size	264 x 264 mils
Material	C194
Surface	Bare Cu
Process	Etched
Lead Lock	No
Part Number	10106409
Material	
Epoxy	3280
Wire	Au wire
Mold Compound	G700LTD
Plating Composition	Matte Tin

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-203701256.000	SCB1920106892.300	1950C5T
MMT-203701930.000	SCB1920106892.300	1950J6C
MMT-203800012.000	SCB1920106892.300	1951J7M

Result ☒ Pass ☐ Fail ☐ ____________________

64L QFN (9x9x0.9 mm) assembled by MMT 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-020E standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard / Method	Qty. (Acc.)	Def/SS	Result	Remarks
Precondition Prior Perform Reliability Tests (At MSL Level 1)	**Electrical Test :**+25°C and 125°C System: J750	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE	JIP/ IPC/JEDEC J-STD-020E		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 125°C System: J750			0/693	Pass	
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: +125°C System: J750		231(0)	0/231	Pass	
	Bond Strength: Wire Pull (> 2.5 grams)		15 (0)	0/15	Pass	
	Bond Shear (>15.00 grams)		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
	Electrical Test: +25°C System: J750		231(0)	0/231	Pass	77 units / lot
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
	Electrical Test :+25°C and 125°C System: J750		231(0)	0/231	Pass	77 units / lot

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard / Method	Qty. (Acc.)	Def/SS	Result	Remarks
High Temperature Storage Life	**Stress Condition:** Bake 175°C, 500 hrs System: SHEL LAB **Electrical Test :**+25°C and 125°C System: J750	JESD22-A103	45(0)	45 0/45	Pass	45 units
Bond Strength Data Assembly	Wire Pull (> 2.5 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>12.60 grams)	JESD22-B116	30 (0) bonds	0/30	Pass	

CCB 3947.001

Pre and Post Change Summary

PCN# MFOL-10XVVK480

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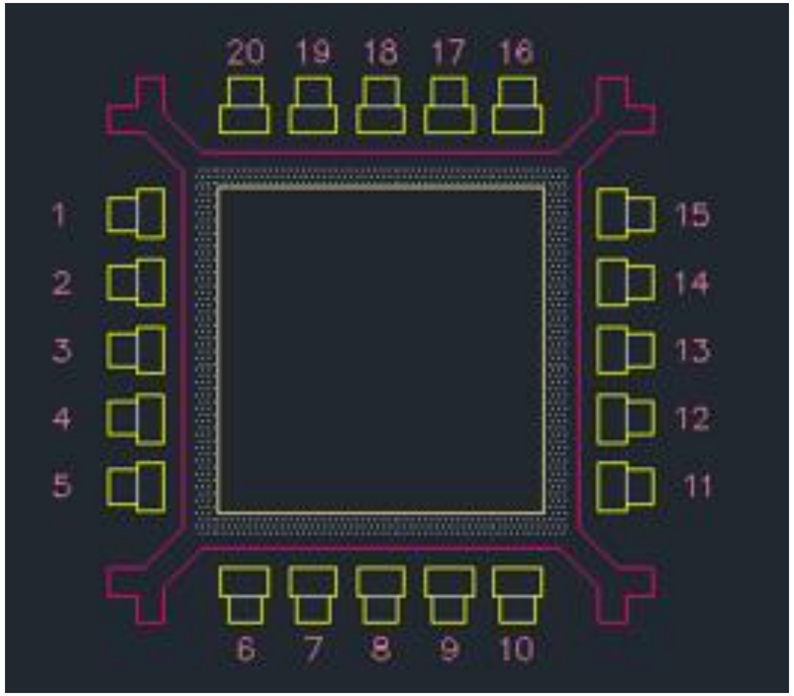
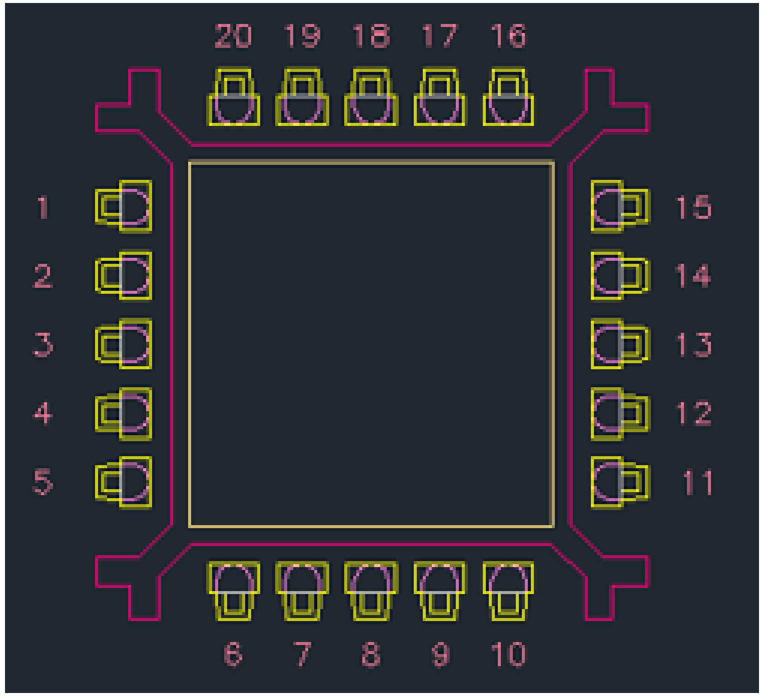
SMART | CONNECTED | SECURE

Lead Frame Comparison

NSEB	MMT
	

Affected Catalog Part Numbers (CPN)

PIC32MM0016GPL020-E/ML
PIC32MM0032GPL020-E/ML
PIC32MM0064GPL020-E/ML
PIC32MM0064GPL020-E/MLVAO
PIC32MM0016GPL020-I/ML
PIC32MM0032GPL020-I/ML
PIC32MM0064GPL020-I/ML
PIC32MM0064GPL020-I/MLVAO
PIC32MM0016GPL020T-I/ML
PIC32MM0032GPL020T-I/ML
PIC32MM0064GPL020T-I/ML