



Product Change Notification / GBNG-23TQLF033

Date:

23-Jun-2023

Product Category:

Interface- Serial Peripherals

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5325 Final Notice: Qualification of MMT as an additional assembly site for MIC74YQS and MIC74YQS-TR catalog part numbers (CPN) available in 16L QSOP package.

Affected CPNs:

[GBNG-23TQLF033_Affected_CPN_06232023.pdf](#)
[GBNG-23TQLF033_Affected_CPN_06232023.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 MIC74YQS and MIC74YQS-TR catalog part numbers (CPN) available in 16L QSOP package.

Pre and Post Change Summary:

	Pre Change	Post Change	
Assembly Site	Amkor Technology Philippine (P1/P2),	Amkor Technology Philippine (P1/P2),	Microchip Technology Thailand

	INC. (ANAP)	INC. (ANAP)	(Branch) / MMT
Wire Material	Au	Au	Au
Die Attach Material	8290	8290	3280
Molding Compound Material	G600	G600	G600
Lead Frame Material	C194	C194	A194
Lead Frame Paddle Size	96x130 mils	96x130 mils	100x160 mils
Lead Frame DAP Surface Prep	Rc Ring Ag	Rc Ring Ag	Ag-RT
Lead Frame Design	Refer to Pre and Post Change comparison.		

Note: *C194, A194 or CDA194 Lead frame material are the same, it is just a MCHP internal labelling difference.

Impacts to Data Sheet:None

Change Impact:None

Reason for Change:To improve manufacturability by qualifying MMT as an additional assembly site.

Change Implementation Status:In Progress

Estimated First Ship Date:July 20, 2023 (date code: 2329)

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

Time Table Summary:

	November 2022					>	June 2023					July 2023				
Workweek	4 5	4 6	4 7	4 8	4 9		2 2	2 3	2 4	2 5	2 6	2 7	2 8	2 9	3 0	3 1
Initial PCN Issue Date	x															
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 02, 2022: Issued initial notification.

June 23, 2023: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on July 20, 2023.

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-23TQLF033_Qual Report.pdf](#)

[PCN_GBNG-23TQLF033_Pre_and_Post_Change_Summary.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)

MIC74YQS

MIC74YQS-TR



QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

Date:
June 7, 2023

**Qualification of MMT as an additional assembly site for
MIC74YQS and MIC74YQS-TR catalog part numbers (CPN)
available in 16L QSOP package.**



MICROCHIP

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of MMT as an additional assembly site for MIC74YQS and MIC74YQS-TR catalog part numbers (CPN) available in 16L QSOP package.
CN	E000146461
QUAL ID	R2201339 Rev. A
MP CODE	VJDA1TH5XA01
Part No.	MIC74YQS-TR
Bonding No.	BD-000989 Rev. 01
CCB	5325
<u>Package</u>	
Type	16L QSOP
Package size	150 mils
<u>Lead Frame</u>	
Paddle size	100 x 160 mils
Material	A194
Surface	Ag-RT
Process	Stamped
Lead Lock	No
Part Number	10101614
Treatment	BOT
<u>Material</u>	
Epoxy	3280
Wire	Au wire
Mold Compound	G600
Plating Composition	Matte Sn



MICROCHIP **PACKAGE QUALIFICATION REPORT**

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-233101732.000	TJM1923098437.100	2244J04
MMT-233101738.000	TJM1923098437.100	2244J0S
MMT-233100214.000	TJM1923098437.100	2244BAW

Result

☒ Pass ☐ Fail ☐ _____

16L QSOP (150 mils) 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
<u>Precondition</u> <u>Prior Perform</u> <u>Reliability Tests</u> (At MSL Level 1)	Electrical Test: +25°C and 85°C System: ASL3K	JESD22-A113	693(0)	0/693		Good Devices
	Bake 150°C, 24 hrs. System: CHINEE	JIP/ IPC/JEDEC J-STD-020E		0/693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			0/693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			0/693		
	Electrical Test: +25°C and 85°C System: ASL3K		693(0)	0/693	Pass	

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		0/231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C and 85°C System: ASL3K		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (>4.00 grams)		15(0)	0/15	Pass	
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		0/231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: ASL3K		231(0)	0/231	Pass	77 units / lot
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 3.6 Volts System: HAST 6000X	JESD22-A110		0/231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C and 85°C System: ASL3K		231(0)	0/231	Pass	77 units / lot

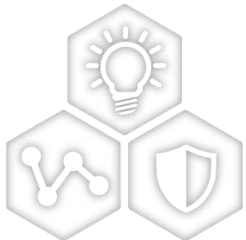
PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs. System: SHEL LAB	JESD22- A103		0/45		45 units
	Electrical Test: +25°C and 85°C System: ASL3K		45(0)	0/45	Pass	
Wire sweep	Wire sweep Inspection 15 Wires / lot	-	45(0) Wires	0/45	Pass	
Bond Strength Data Assembly	Wire Pull (>4.00 grams)	Mil. Std. 883-2011	30(0) Wires	0/30	Pass	
	Bond Shear (>18.00 grams)	CDF-AEC- Q100-001	30(0) bonds	0/30	Pass	

CCB 5325
Pre and Post Change Summary
PCN #: GBNG-23TQLF033



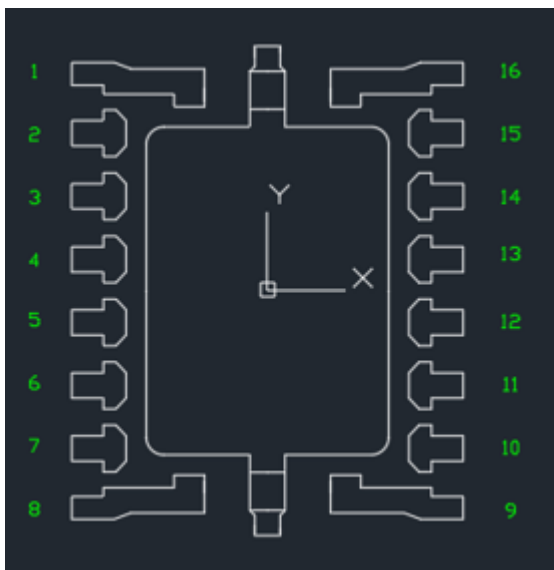
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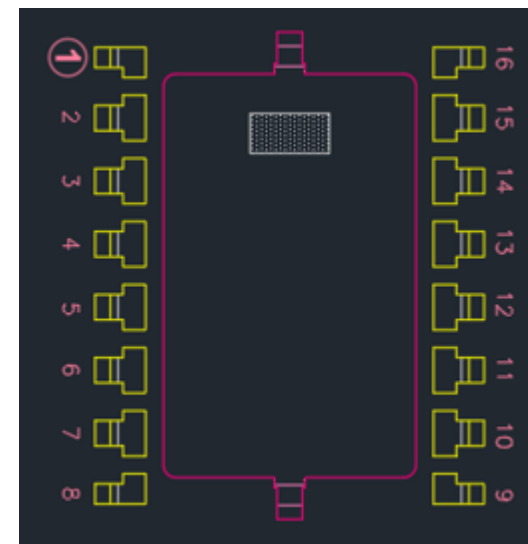
Lead Frame Comparison

ANAP



Lead frame material	C194
Lead Frame Paddle Size	96x130 mils
Lead Frame DAP Surface Prep	Rc Ring Ag

MMT



Lead frame material	A194
Lead Frame Paddle Size	100x160 mils
Lead Frame DAP Surface Prep	Ag-RT

Note: Not fit to scale.