



Product Change Notification / LIAL-15QPNY176

Date:

13-Apr-2021

Product Category:

Instrumentation Amplifier, Linear Op Amps, Memory, Temperature Sensors

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4506 Final Notice: Qualification of MMT as an additional assembly site for selected products available in 8L TDFN (2x3x0.8mm) package.

Affected CPNs:

[LIAL-15QPNY176_Affected_CPN_04132021.pdf](#)
[LIAL-15QPNY176_Affected_CPN_04132021.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 MMT as an additional assembly site for selected products available in 8L TDFN (2x3x0.8mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change
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Assembly Site	UTAC Thai Limited (UTL-1) LTD. NSEB		UTAC Thai Limited (UTL-1) LTD. NSEB		Microchip Technology Thailand (Branch)/ MMT
	Au	CuPdAu	Au	CuPdAu	CuPdAu
Wire material	8200T	8600	8200T	8600	3280
Die attach material	G700LTD		G700LTD		G700LTD
Molding compound material	A194		A194		A194
Lead frame material	No		No		No
Lead Frame Lead Lock					

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 First Ship Date:

April 15, 2021 (date code: 2116)

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

Time Table Summary:

Workweek	December 2020					-	April 2021					
	49	50	51	52	53		>	14	15	16	17	18
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:

December 21, 2020: Issued initial notification.

April 7, 2021: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on April 15, 2021.**April 13, 2021:** Re-issued final notification. Corrected the lead frame lead-lock from Yes to No.

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

Attachments:

[PCN_LIAL-15QPNY176 _Pre and Post Change Lead frame comparison.pdf](#)

[PCN_LIAL-15QPNY176 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)

MCP6V12T-E/MNY
MCP6V17T-E/MNY
MCP6V32T-E/MNY
MCP6V37T-E/MNY
MCP6V82T-E/MNY
MCP6V87T-E/MNY
MCP6V92T-E/MNY
MCP6V62T-E/MNY
MCP6V67T-E/MNY
MCP6V72T-E/MNY
MCP6V77T-E/MNY
24LC32AT-I/MNY
24AA32AT-I/MNY
93LC46AT-I/MNY
93AA46AT-I/MNY
93LC46AT-E/MNY
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93AA46BT-I/MNY
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MCP9843T-BE/MNY
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CCB 4506
Pre and Post Change Lead Frame Comparison
PCN # LIAL-15QPNY176

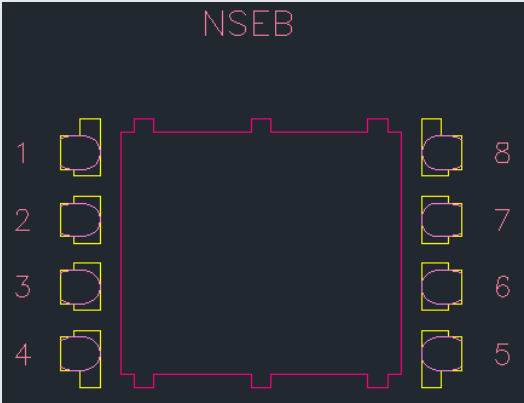
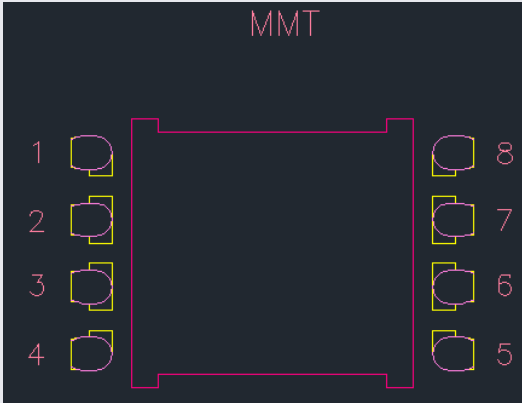


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Lead frame comparison

Pre change	Post Change
NSEB	MMT
 <p>The diagram shows the NSEB lead frame. It features a central rectangular body with a pink outline. On the left side, there are four leads numbered 1, 2, 3, and 4 from top to bottom. On the right side, there are four leads numbered 8, 7, 6, and 5 from top to bottom. Each lead is highlighted with a yellow outline. The text 'NSEB' is written in pink at the top center of the diagram.</p>	 <p>The diagram shows the MMT lead frame. It features a central rectangular body with a pink outline. On the left side, there are four leads numbered 1, 2, 3, and 4 from top to bottom. On the right side, there are four leads numbered 8, 7, 6, and 5 from top to bottom. Each lead is highlighted with a yellow outline. The text 'MMT' is written in pink at the top center of the diagram.</p>



QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: LIAL-15QPNY176

Date
March 17, 2021

Qualification of MMT as an additional assembly site for selected products available in 8L TDFN (2x3x0.8mm) package.



MICROCHIP PACKAGE QUALIFICATION REPORT

Purpose	Qualification of MMT as an additional assembly site for selected products available in 8L TDFN (2x3x0.8mm) package.
CCB No	4506
CN	ES350779
QUAL ID	R2000987 Rev. A
MP CODE	D5AP1Y5QXB00
Part No.	25AA640AT-E/MNY
Bonding No.	BDM-002778 Rev. A
<u>Package</u>	
Type	8L TDFN
Package size	2x3x0.8 mm
<u>Lead Frame</u>	
Paddle size	83 x 71 mils
Material	A194
Surface	NiPdAu (PPF)
Process	Etched
Lead Lock	No
Treatment	Roughening LF
Part Number	10100853
<u>Material</u>	
Epoxy	3280
Wire	CuPdAu wire
Mold Compound	G700LTD
Plating Composition	NiPdAu (PPF)



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-213601929.000	GRSM416063167.500	2049RRM
MMT-213701243.000	GRSM416063167.500	2050YDG
MMT-213701244.000	GRSM416063167.500	2050YDK

Result

Pass Fail _____

8L TDFN (2x3x0.8 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
<u>Precondition</u> <u>Prior Perform</u> <u>Reliability Tests</u> (At MSL Level 1)	Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE	JIP/IPC/JEDEC		693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH	J-STD-020E		693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT			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 Electrical Test: + 25°C ,85°C and 125°C System: NEXTEST_PT	JESD22- A104		231		Parts had been pre-conditioned at 260°C 77 units / lot
	Stress Condition: -65°C to +150°C, 1000 Cycles System: TABAI ESPEC TSA-70H Electrical Test: + 25°C ,85°C and 125°C System: NEXTEST_PT		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 Electrical Test: +25°C System: NEXTEST_PT	JESD22- A118		231		Parts had been pre-conditioned at 260°C 77 units / lot
	Stress Condition: +130°C/85%RH, 192 hrs. System: HAST 6000X Electrical Test: +25°C System: NEXTEST_PT		231(0)	0/231	Pass	
			231(0)	0/231	Pass	
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.5 Volts System: HAST 6000X Electrical Test: + 25°C ,85°C and 125°C System: NEXTEST_PT	JESD22- A110		231		Parts had been pre-conditioned at 260°C 77 units / lot
	Stress Condition: +130°C/85%RH,192 hrs. Bias Volt: 5.5 Volts System: HAST 6000X Electrical Test: + 25°C ,85°C and 125°C System: NEXTEST_PT		231(0)	0/231	Pass	
			231(0)	0/231	Pass	

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		45		45 units
	Electrical Test: +25°C, 85°C and 125°C System: NEXTEST_PT		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 (> 2.5 grams)	Mil. Std. 883-2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>15.00 grams)	CDF-AEC- Q100-001	30 (0) bonds	0/30	Pass	