



Product Change Notification / LIAL-15QPNY176

Date:

19-Jan-2021

Product Category:

Instrumentation Amplifier, Linear Op Amps, Memory, Temperature Sensors

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4506 Initial 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_01192021.pdf](#)

[LIAL-15QPNY176_Affected_CPN_01192021.csv](#)

Notification Text:

PCN Status:Initial 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 Change:

Assembled at NSEB using gold (Au) bond wire or palladium coated copper with gold flash (CuPdAu) bond wire and 8200T die attach or 8600 die attach material.

Post Change:

Assembled at NSEB using gold (Au) bond wire or palladium coated copper with gold flash (CuPdAu) bond wire and 8200T die attach or 8600 die attach material or assembled at MMT using palladium coated copper with gold flash (CuPdAu) bond wire and 3280 die attach material.

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	CuPdAu	Au	CuPdAu	CuPdAu
Die attach material	8200T	8600	8200T	8600	3280
Molding compound material	G700LTD		G700LTD		G700LTD
Lead frame material	A194		A194		A194
Lead Frame Lead Lock	No		No		No

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:**February 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:

	December 2020					-->	February 2021				
Workweek	49	50	51	52	53		05	06	07	08	09
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:**December 21, 2020:** Issued initial notification.**January 19, 2021:** Re-issued initial notification to update the pre and post change summary to correct the lead frame lead lock of NSEB 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 Rev 1.pdf
PCN LIAL-15QPNY176_Qual Plan.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.

Part numbers affected

MCP6V77T-E/MNY
24LC32AT-I/MNY
24AA32AT-I/MNY
93LC46AT-I/MNY
93AA46AT-I/MNY
93LC46AT-E/MNY
93LC46BT-I/MNY
93AA46BT-I/MNY
93LC46BT-E/MNY
93C46BT-I/MNY
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93C46AT-I/MNY
93C46AT-E/MNY
93LC46CT-I/MNY
93AA46CT-I/MNY
93LC46CT-E/MNY
93LC56CT-I/MNY
93AA56CT-I/MNY
93LC56AT-I/MNY
93AA56AT-I/MNY
93LC56BT-I/MNY
93AA56BT-I/MNY
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MCP6V72T-E/MNY

CCB 4506
Pre and Post Change Lead Frame Comparison
PCN # LIAL-15QPNY176

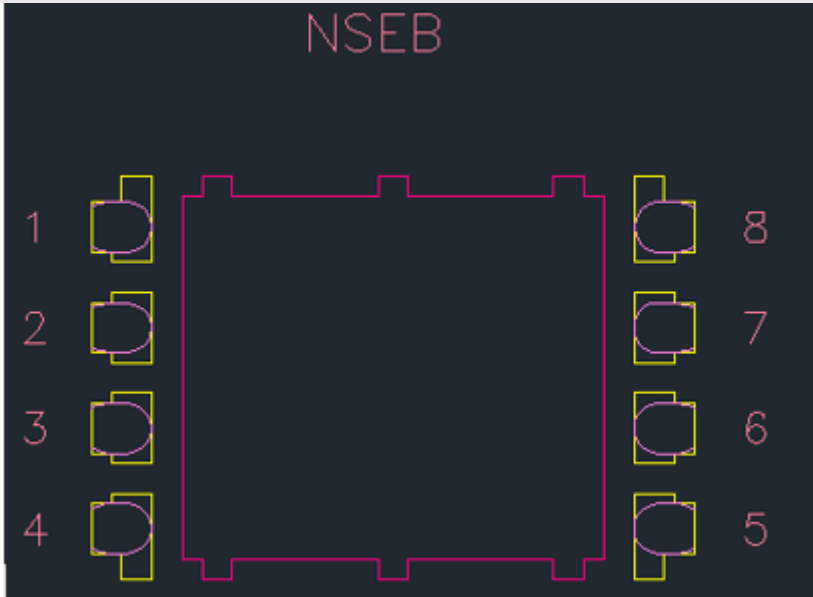
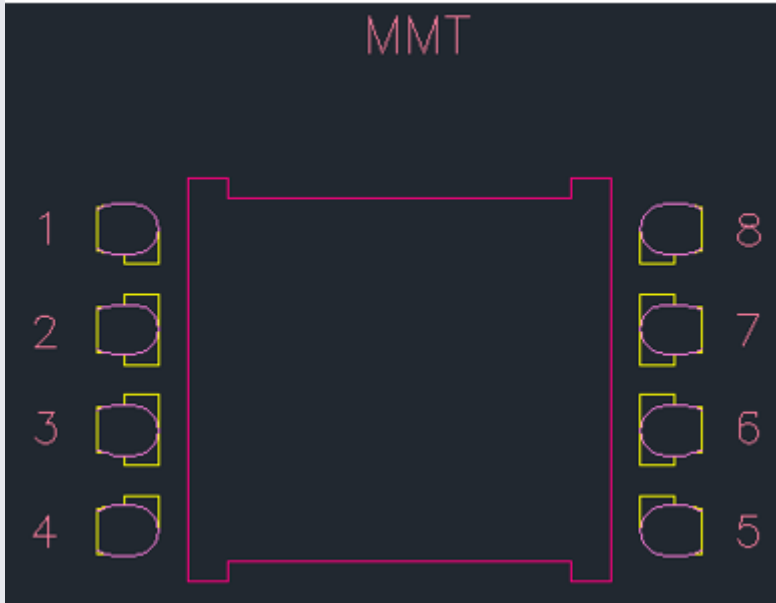


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Lead frame comparison

Pre change	Post Change				
NSEB	MMT				
 The diagram shows a top-down view of an NSEB (Normal Single End Board) lead frame. It features a central rectangular body with a pink outline. On the left and right sides, there are four pins each, numbered 1 through 4 on the left and 8 through 5 on the right. The pins are yellow with purple outlines. The text 'NSEB' is written in pink at the top of the diagram.	 The diagram shows a top-down view of an MMT (Micro Miniature Technology) lead frame. It features a central rectangular body with a pink outline. On the left and right sides, there are four pins each, numbered 1 through 4 on the left and 8 through 5 on the right. The pins are yellow with purple outlines. The text 'MMT' is written in pink at the top of the diagram.				
<table><tr><td>Lead frame lead-lock</td><td>No</td></tr></table>	Lead frame lead-lock	No	<table><tr><td>Lead frame lead-lock</td><td>No</td></tr></table>	Lead frame lead-lock	No
Lead frame lead-lock	No				
Lead frame lead-lock	No				



QUALIFICATION PLAN SUMMARY

PCN#: LIAL-15QPNY176

December 10, 2020

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

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

<u>Misc.</u>	Assembly site	MMT
	BD Number	BDM-002777
	CCB#	4506
	MP Code (MPC)	D5AP1Y5QXB00
	Part Number (CPN)	25AA640AT-E/MNY
	MSL information	MSL-1@260C
	Assembly Shipping Media (T/R, Tube/Tray)	Tube
	Base Quantity Multiple (BQM)	3300
	Reliability Site	MTAI
<u>Lead-Frame</u>	Paddle size	83x71
	Material	A194
	DAP Surface Prep	NiPdAu (PPF)
	Treatment	Rough PPF (ME2)
	Process	Etched
	Lead-lock	No
	Part Number	10100853
	Lead Plating	NiPdAu (PPF)
	Strip Size	250x70mm
	Strip Density	1690 units/Strip
<u>Bond Wire</u>	Material	CuPdAu
<u>Die Attach</u>	Part Number	3280
	Conductive	Yes
<u>Mold Compound</u>	Part Number	G700LTD
<u>PKG</u>	PKG Type	TDFN
	Pin/Ball Count	8
	PKG width/size	2x3x0.8mm

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Special Instructions
Standard Pb-free Solderability	J-STD-002D ; 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	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.
Backward Solderability	J-STD-002D ;Perform 8 hours steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Backward: Matte tin/ NiPdAu finish, SnPb solder, wetting temp 215°C for SMD.	22	5	1	27	> 95% lead coverage	
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	30 bonds from a min. 5 devices.
Wire Sweep							Required for any reduction in wire bond thickness.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	
Preconditioning - Required for surface mount devices	+150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020E for package type; Electrical test pre and post stress at +25°C. and hot MSL-1@260	231	15	3	738	0	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.
HAST	+130°C/85% RH for 96 hours or 110°C/85%RH for 264 hours. Electrical test pre and post stress at +25°C and hot temp. 2X Extended stress Max temp testing at 125C.	77	5	3	246	0	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UFAST	+130°C/85% RH for 96 hrs or +110°C/85% RH for 264 hrs. Electrical test pre and post stress at +25°C 2X Extended stress Max temp testing at 125C.	77	5	3	246	0	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Special Instructions
Temp Cycle	-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. 2X Extended stress Max temp testing at 125C.	77	5	3	246	0	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.