



Product Change Notification: CBOL-21FIYZ771

Date:

29-Jun-2026

Product Category:

Memory

Notification Subject:

CCB 8357 Final Notice: Qualification of MMT as an additional assembly site for 47L04T-I/ST, 47L04-I/ST, 47L04-E/ST, 47L04T-E/ST, 47C04T-E/ST, 47C04T-I/ST, 47C04-I/ST, 47C04-E/ST, 47L16T-E/ST, 47L16-I/ST, 47L16-E/ST, 47L16T-I/ST, 47C16-I/ST, 47C16-E/ST, 47C16T-E/ST and 47C16T-I/ST catalog part numbers (CPN) available in 8L TSSOP (4.4mm) package.

Affected CPNs:

[CBOL-21FIYZ771_Affected_CPN_06292026.pdf](#)

[CBOL-21FIYZ771_Affected_CPN_06292026.csv](#)

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 47L04T-I/ST, 47L04-I/ST, 47L04-E/ST, 47L04T-E/ST, 47C04T-E/ST, 47C04T-I/ST, 47C04-I/ST, 47C04-E/ST, 47L16T-E/ST, 47L16-I/ST, 47L16-E/ST, 47L16T-I/ST, 47C16-I/ST, 47C16-E/ST, 47C16T-E/ST and 47C16T-I/ST catalog part numbers (CPN) available in 8L TSSOP (4.4mm) package.

Pre and Post Summary Changes:

	Pre Change		Post Change			Change (Yes/No)
Assembly Site	Amkor Technology	UTAC Thai	Amkor Technology	UTAC Thai	Microchip Technology	Yes

Method to Identify Change: Traceability Code

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

Revision History: June 29, 2026: Issued final notification.

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

Attachments:

[PFAS Elimination and Die Attach_Explanation.pdf](#)
[PCN_CBOL-21FIYZ771_Pre_and_Post Change Summary.pdf](#)
[PCN CBOL-21FIYZ771_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):

47C16-I/ST

47C16-E/ST

47C16T-E/ST

47C16T-I/ST

47L04T-I/ST

47L04-I/ST

47L04-E/ST

47L04T-E/ST

47C04T-E/ST

47C04T-I/ST

47C04-I/ST

47C04-E/ST

47L16T-E/ST

47L16-I/ST

47L16-E/ST

47L16T-I/ST



QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: CBOL-21FIYZ771

Date:
June 22, 2026

Qualification of MMT as an additional assembly site for 47L04T-I/ST, 47L04-I/ST, 47L04-E/ST, 47L04T-E/ST, 47C04T-E/ST, 47C04T-I/ST, 47C04-I/ST, 47C04-E/ST, 47L16T-E/ST, 47L16-I/ST, 47L16-E/ST, 47L16T-I/ST, 47C16-I/ST, 47C16-E/ST, 47C16T-E/ST and 47C16T-I/ST catalog part numbers (CPN) available in 8L TSSOP (4.4mm) package. This is a Q100 grade1 qualification and qualification by similarity (QBS).



MICROCHIP PACKAGE QUALIFICATION REPORT

Purpose	Qualification of MMT as an additional assembly site for 47L04T-I/ST, 47L04-I/ST, 47L04-E/ST, 47L04T-E/ST, 47C04T-E/ST, 47C04T-I/ST, 47C04-I/ST, 47C04-E/ST, 47L16T-E/ST, 47L16-I/ST, 47L16-E/ST, 47L16T-I/ST, 47C16-I/ST, 47C16-E/ST, 47C16T-E/ST and 47C16T-I/ST catalog part numbers (CPN) available in 8L TSSOP (4.4mm) package. This is a Q100 grade1 qualification and qualification by similarity (QBS).
CN	E000247882
QUAL ID	R2401352 Rev A
MP CODE	DEEY1YD4XVB1
Part No.	MCP6424T-E/STVAO
Bonding No.	BD-002542 Rev. 01
CCB No.	7171 (Qual Date: March 7, 2025) and 8357
<u>Package</u>	
Type	14L TSSOP
Package size	4.4 mm
<u>Lead Frame</u>	
Paddle size	126 x 150 mils
Material	C7025
Surface	Bare Cu
Process	Etched
Lead Lock	No
Part Number	10101417
Treatment	Roughening
<u>Material</u>	
Epoxy	QMI519
Wire	Au wire
Mold Compound	G600V
Plating Composition	Matte Sn



MICROCHIP

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-252900001.000	TMPE224194127.300	2442A7H
MMT-252900005.000	TMPE224194127.300	2442C87
MMT-252900006.000	TMPE224194127.300	2442CCT

Result

☒ Pass ☐ Fail ☐ _____

14L TSSOP (4.4 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, 85°C and 125°C System: ETS300	JESD22- A113	693(0)	0/693	Pass	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, 85°C and 125°C System: ETS300		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: -55°C to +150°C, 1000 Cycles System: TABAI ESPEC TSA-70H	JESD22-A104		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C, 85°C and 125°C System: ETS300		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (>3.00 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: ETS300		231(0)	0/231	Pass	77 units / lot
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.5 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C, 85°C and 125°C System: ETS300		231(0)	0/231	Pass	77 units / lot

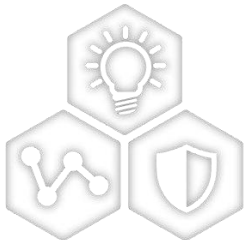
PACKAGE QUALIFICATION REPORT

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: TPS Bake Oven Electrical Test: +25°C, 85°C and 125°C System: ETS300	JESD22-A103	45(0)	45 0/45	Pass	45 units
Solderability Temp 245°C	Steam Aging: Temp 93°C, 8Hrs System: SAS-3000 Solder Dipping: Solder Temp. 245°C Solder material: Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERS A RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22(0)	0/22 0/22 0/22	Pass	
Bond Strength Data Assembly	Wire Pull (>3.00 grams) Bond Shear (>18.00 grams)	Mil. Std. 883-2011 CDF-AEC- Q100-001	30(0) Wires 30(0) Bonds	0/30 0/30	Pass Pass	

CCB 8357
Pre and Post Change Summary
PCN #: CBOL-21FIYZ771

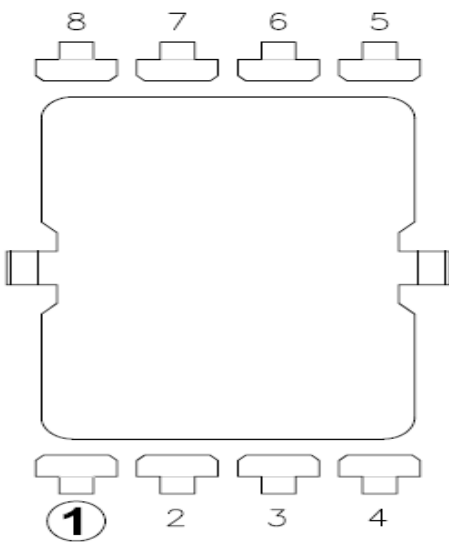
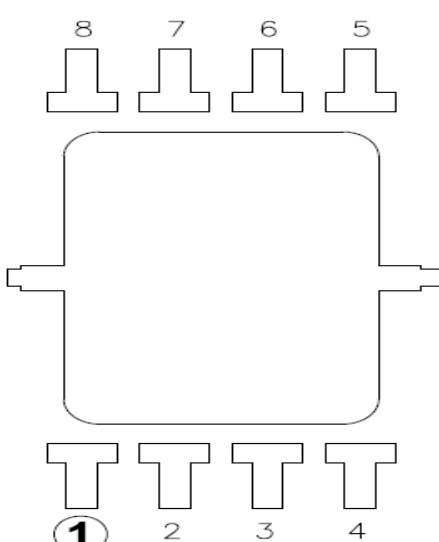
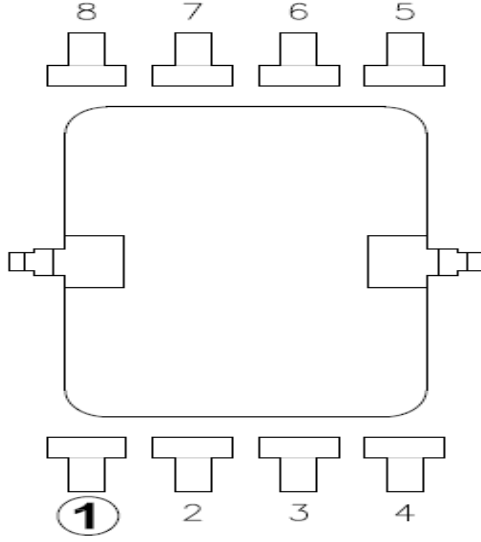


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SMART | CONNECTED | SECURE

Lead Frame Comparison

ANAP	NSEB	MMT																		
ANAP  Note: Not to scale <table><tr><td>DAP Surface Prep</td><td>Ag</td></tr><tr><td>Lead-Frame Paddle Size</td><td>126 x 87 mils</td></tr><tr><td>Lead-Frame Material</td><td>C7025</td></tr></table>	DAP Surface Prep	Ag	Lead-Frame Paddle Size	126 x 87 mils	Lead-Frame Material	C7025	NSEB  Note: Not to scale <table><tr><td>DAP Surface Prep</td><td>Ag</td></tr><tr><td>Lead-Frame Paddle Size</td><td>118 x 87 mils</td></tr><tr><td>Lead-Frame Material</td><td>C7025</td></tr></table>	DAP Surface Prep	Ag	Lead-Frame Paddle Size	118 x 87 mils	Lead-Frame Material	C7025	MMT  Note: Not to scale <table><tr><td>DAP Surface Prep</td><td>Bare Cu</td></tr><tr><td>Lead-Frame Paddle Size</td><td>118 x 87 mils</td></tr><tr><td>Lead-Frame Material</td><td>C7025</td></tr></table>	DAP Surface Prep	Bare Cu	Lead-Frame Paddle Size	118 x 87 mils	Lead-Frame Material	C7025
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Eliminating PFAS from Microchip ICs



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SMART | CONNECTED | SECURE

Microchip
August 2025

Eliminating PFAS from MCHP ICs

- **What is PFAS**
- **Microchip's Environmental Stewardship**
- **Microchip Products with PFAS**
- **Time Frame to PFAS-Free Die Attach**
- **What is Die Attach**
- **Will clients be required to switch to PFAS free products**
- **Risk Assessment**

What is PFAS: Poly(Per) FluoroAlkyL Substances (**PFAS**)

Poly(Per) FluoroAlkyL Substances (PFAS)

- There may be 12,000 or more PFAS chemicals that are used in small amounts in many different items
 - PFAS can be in the product itself.
 - PFAS can also be used to manufacture products while not in the product itself

PFAS is the new “buzzword” throughout many industries

- Often nicknamed “forever chemicals” because once released into the environment, it never degrades and will accumulate over time
- As PFAS accumulates in the environment over long periods of time, there can be increasing toxicity and polluting effects
- Therefore, government agencies around the globe are considering legislation toward removal of PFAS although PFAS legislations are not fully defined yet

Microchip's Environmental Stewardship

Although very few laws have been enacted regarding PFAS to date, there is a rapidly growing movement among governments around the world to eliminate PFAS

- Initial legislation has targeted on clothing and food products
- Additional legislation and their timings continue to evolving

Companies such as Microchip, which are committed to addressing contaminants in water, air, food, and living organisms, are proactively working to remove PFAS even in the absence of specific legal requirements.

Microchip's suppliers are also taking proactive steps to eliminate PFAS chemicals from the materials they provide to Microchip.

Microchip believes it is prudent to take immediate action toward offering PFAS-free products to all clients, regardless of application, industry, country, or current regulatory requirements.

Achieving “PFAS-Free” status may serve as a competitive advantage for both Microchip and its clients.

Microchip products with PFAS

The primary material in Microchip products containing PFAS is known as die attach. PFAS-free die attach is not new to either Microchip or the industry; in fact, Microchip has shipped hundreds of millions of units utilizing PFAS-free die attach.

Both PFAS and PFAS-free die attach materials are currently in use because PFAS was not previously identified as a substance of concern.

The change announced in this Product Change Notification (PCN) for Microchip-owned factories involves transitioning to the same PFAS-free die attach that has already been qualified and used in other products.

Time Frame to PFAS-Free Die Attach

Qualification of products assembled at Microchip-owned factories has been completed.

While inventory containing PFAS die attach will continue to be shipped, the implementation of PFAS-free die attach in the assembly process is scheduled to begin as early as September 3, 2025.

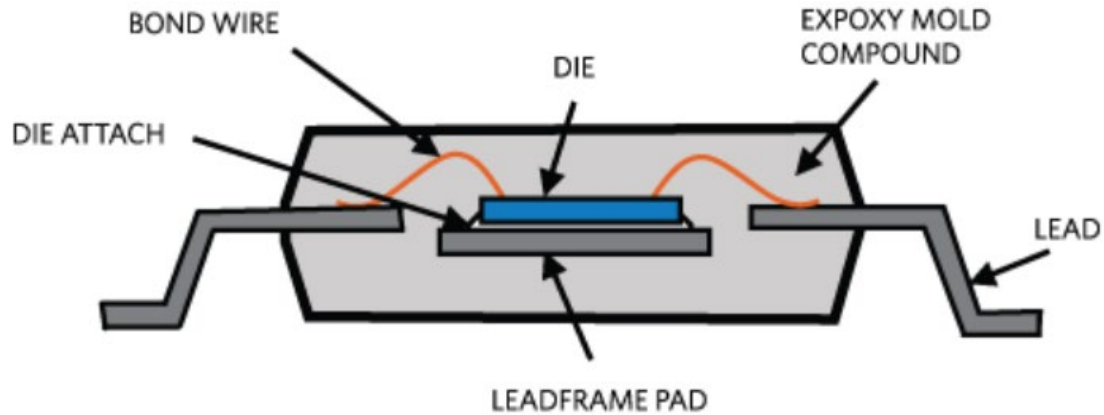
Microchip will consume all existing inventory and die attach, so the exact implementation date will depend on when current inventories are depleted.

- For PPAP clients IMDS/CAMDS material content declarations will be updated.

Schedules for assembly locations not owned by Microchip (subcontractors or "subcons") are currently under review. We anticipate a similar mix of products already utilizing both PFAS and PFAS-free die attach at these locations.

Product Change Notifications (PCNs) announcing die attach changes at subcontractor sites will be issued once schedules are finalized. We expect these timelines to be similar to those for our internal factories.

What is die attach



A thin layer of epoxy between the silicon die and copper pad portion of the lead frame.

- Holds the die in place during the wire bond and mold encapsulation processes
- The bottom of the die has no transistors or active circuits.
- The interface is identical regardless of device type, fab location, technology node, wire material etc.
- **Therefore, allows extremely broad range of products to be grouped into a single qualification.**

Will Clients be required to switch to PFAS-Free Products

The timeline for legislation to eliminate PFAS chemicals remains uncertain; however, regulatory action is anticipated.

Suppliers of PFAS chemicals and raw materials containing PFAS are already announcing end-of-life plans in advance of any formal legislation.

It is expected that suppliers will discontinue offering die attach materials containing PFAS within the next two years, regardless of when government regulations take effect.

While Microchip is committed to providing as much transition time as possible for our clients, we strongly encourage you to begin planning now to avoid potential supply interruptions.

Risk Assessment:



Microchip does not anticipate that this change will impact our clients for the following reasons:

- Microchip has been using PFAS-free die attach material for several years.
- We have shipped hundreds of millions of units utilizing this material without incident.
- Die Attach is not application relevant.

Given these factors, Microchip believes there is minimal cause for concern regarding this change, and additional client qualifications would be redundant and time-consuming. However, if you have any questions that are not addressed in the PCN or this presentation, please do not hesitate to contact us.

