Product Change Notification / NTDO-27IGXA459

Date:

31-Oct-2022

Product Category:

Memory

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4649.001 Final Notice: Qualification of MMT as an additional assembly site for selected 24LC256T, 24AA256T and 24FC256T device families available in 8L TDFN (2x3x0.8mm) package.

Affected CPNs:

NTDO-27IGXA459_Affected_CPN_10312022.pdf
NTDO-27IGXA459_Affected_CPN_10312022.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 24LC256T, 24AA256T and 24FC256T device families available in 8L TDFN (2x3x0.8mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change	
Assembly Site	UTAC Thai	UTAC Thai Limited	Microchip Technology

	Limited (UTL-3)	(UTL-3)	Thailand (Branch) (MMT)
Wire Material	Au	Au	CuPdAu
Die Attach Material	8600	8600	3280
Molding Compound Material	G700LTD	G700LTD	G700LTD
Lead-Frame Material	C194	C194	A194
Lead-Frame Paddle Size	83 x 71 mils	83 x 71 mils	83 x 71 mils
DAP Surface Prep	PPF	PPF	PPF

*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 productivity by qualifying MMT as an additional assembly site.

Change Implementation Status: In Progress

Estimated First Ship Date: December 12, 2022 (date code: 2251)

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

Time Table Summary:

	October 2022					**>**	**December 2022**				
Workweek	41	42	43	44	45		49	50	51	52	53
Final PCN Issue Date					x						
Qual Report Availability									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: October 31, 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_NTDO-27IGXA459_Pre and Post Change Summary.pdf
PCN_NTDO-27IGXA459_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.

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: NTDO-27IGXA459

Date:
December 14, 2021

Qualification of MMT as an additional assembly site for selected 24LC256T, 24AA256T and 24FC256T available in 8L TDFN (2x3x0.8mm) package. This is a qualification by similarity (QBS).

PACKAGE QUALIFICATION REPORT

Purpose Qualification of MMT as an additional assembly site for selected 24LC256T, 24AA256T and 24FC256T available in 8L TDFN (2x3x0.8mm) package. This is a qualification by similarity (QBS).

CN	ES357884
QUAL ID	R2100865 Rev A
MP CODE	66829Y5QXD00
Part No.	24CS512T-E/MNY
Bonding No.	BDE-006797 Rev. 01
CCB	4649 and 4649.001

Package

Type	8L TDFN
Package size	2x3x0.8 mm

Lead Frame

Paddle size	83 x 71 mils
Material	A194
Surface	PPF
Process	Etched
Lead Lock	No
Part Number	10100853

Material

Epoxy	3280
Wire	CuPdAu
Mold Compound	G700LTD
Plating Composition	NiPdAu

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-220902227.000	U08D921058103.200	2121TME
MMT-220902225.000	U08D921058103.200	2121QBE
MMT-220902226.000	U08D921058103.200	2121T0H

Result [X] 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
Precondition Prior Perform Reliability Tests (At MSL Level 1)	**Electrical Test:** +25°C, 85°C and 125°C System: NEXTEST_PT Bake 150°C, 24 hrs System: CHINEE 85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 **Electrical Test:** +25°C, 85°C and 125°C System: NEXTEST_PT	JESD22- A113 JIP/ IPC/JEDEC J-STD-020E	693(0)	693 693 693 693 0/693	Pass	Good Devices
Temp Cycle	**Stress Condition:** -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H **Electrical Test:** +85°C and 125°C System: NEXTEST_PT **Stress Condition:** -65°C to +150°C, 1000 Cycles System: TABAI ESPEC TSA-70H **Electrical Test:** +85°C and 125°C System: NEXTEST_PT **Bond Strength:** Wire Pull (> 2.5 grams) Bond Shear (>15.00 grams)	JESD22- A104	231(0) 231(0) 15 (0) 15 (0)	231 0/231 231 0/231 0/15 0/15	Pass Pass Pass Pass	Parts had been pre-conditioned at 260°C 77 units / lot
UNBIASED- HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. System: HAST 6000X **Electrical Test:** +25°C System: NEXTEST_PT **Stress Condition:** +130°C/85%RH, 192 hrs. System: HAST 6000X **Electrical Test:** + 25°C System: NEXTEST_PT	JESD22- A118	231(0) 231(0)	231 0/231 231 0/231	Pass Pass	Parts had been pre-conditioned at 260°C 77 units / lot
HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. **Bias Volt:** 5.0 Volts System: HAST 6000X **Electrical Test:** +25°C, 85°C and 125°C System: NEXTEST_PT **Stress Condition:** +130°C/85%RH,192 hrs. **Bias Volt:** 5.0 Volts System: HAST 6000X **Electrical Test:** +25°C, 85°C and 125°C System: NEXTEST_PT	JESD22- A110	231(0) 231(0)	231 0/231 231 0/231	Pass Pass	Parts had been pre-conditioned at 260°C 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 **Electrical Test:** +25°C, 85°C and 125°C System: NEXTEST_PT	JESD22-A103	45(0)	45 0/45	Pass	45 units
Solderability **Temp 215°C**	**Steam Aging:** Temp 93°C,8Hrs System: SAS-3000 Solder Dipping: Solder Temp.215°C Solder material: SnPb Sn63, Pb37 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22 (0)	22 22 0/22	Pass	
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: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22 (0)	22 22 0/22	Pass	
Bond Line Thickness	Bond Line Thickness	SPI-45528	15(0)	15(0)	Pass	5 units / lot
Wire sweep	Wire sweep Inspection 15 Wires / lot	-	45(0) Wires	0/45	Pass	
Physical Dimensions	Physical Dimension, 10 units from 1 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Wire Pull (> 2.50 grams)	Mil. Std. 883-2011	30 (0) Wires	0/30	Pass	
	Bond Shear (> 12.60 grams)	CDF-AEC-Q100-001	30 (0) bonds	0/30	Pass	

CCB 4649.001
Pre and Post Change Summary
PCN #: NTDO-27IGXA459

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LEAD FRAME COMPARISON

	UTL3	MMT
Lead-Frame	1 2 3 4 8 7 6 5	1 2 3 4 8 7 6 5
Lead-Frame Material	C194	A194
Lead-Frame Paddle Size	83 x 71 mils	83 x 71 mils
DAP Surface Prep	PPF	PPF

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

NTDO-27IGXA459 - CC 24AA256T and 24FC256T device families available in 8L TDFN (2x3x0.8mm) pack

Affected Catalog Part Numbers(CPN)

24LC256T-I/MNY
24AA256T-I/MNY
24FC256T-I/MNY
24LC256T-E/MNY
24AA256T-E/MNY