



Product Change Notification / ASER-27FWWD026

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**Date:**

16-Sep-2021

**Product Category:**

Special Purpose Analog to Digital Converters

**PCN Type:**

Manufacturing Change

**Notification Subject:**

CCB 4713 Final Notice: Qualification of MMT as a new assembly site for TC500CPE, TC500ACPE and TC500CPE519 catalog part numbers (CPN) available in 16L PDIP (.300in) package.

**Affected CPNs:**

[ASER-27FWWD026\\_Affected\\_CPN\\_09162021.pdf](#)  
[ASER-27FWWD026\\_Affected\\_CPN\\_09162021.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 a new assembly site for TC500CPE, TC500ACPE and TC500CPE519 catalog part numbers (CPN) available in 16L PDIP (.300in) package.

**Pre and Post Change Summary:**

	Pre Change	Post Change
Assembly Site	Amkor Technology Philippine, INC. (ANAP)	Microchip Technology Thailand (MMT)
Wire material	Au	Au

<b>Die attach material</b>	8361J	CRM-1064L
<b>Molding compound material</b>	G600C	GE800
<b>Lead frame material</b>	C194	C194
<b>Lead-frame paddle size</b>	140x170(mils)	150x230(mils)
	See Pre and Post Change Summary for comparison.	

**Impacts to Data Sheet:**None

**Change Impact:**None

**Reason for Change:**To improve manufacturability by qualifying MMT as new assembly site

**Change Implementation Status:**In Progress

**Estimated First Ship Date:**

October 10, 2021 (date code: 2138)

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

**Time Table Summary:**

	June 2021				->	September 2021					October 2021				
	23	24	25	26		36	37	38	39	40	41	42	43	44	45
Initial PCN Issue Date	X														
Qual Report Availability								X							
Final PCN Issue Date								X							
Estimated first ship 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:**

**June 1, 2021:** Issued initial notification.**September 16, 2021:** Issued final notification. Attached the qualification report. Provided estimated first ship date to be on October 10, 2021.

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

## Attachments:

[PCN\\_ASER-27FWWD026\\_Pre and Post Change\\_Summary.pdf](#)  
[PCN\\_ASER-27FWWD026\\_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.

Affected Catalog Part Numbers (CPN)

TC500CPE

TC500CPE519

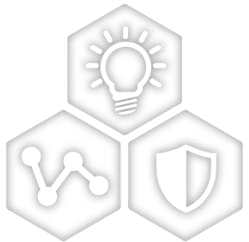
TC500ACPE

**CCB 4713**  
**Pre and Post Change Summary**  
**PCN #: ASER-27FWWD026**



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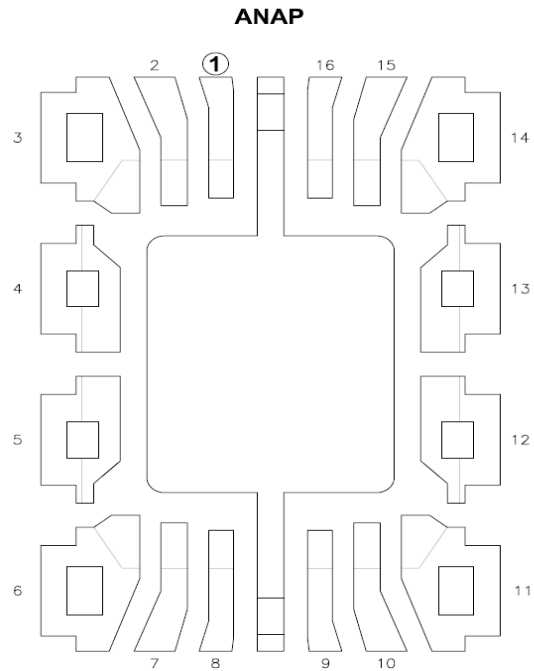
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SMART | CONNECTED | SECURE

# Lead Frame Comparison

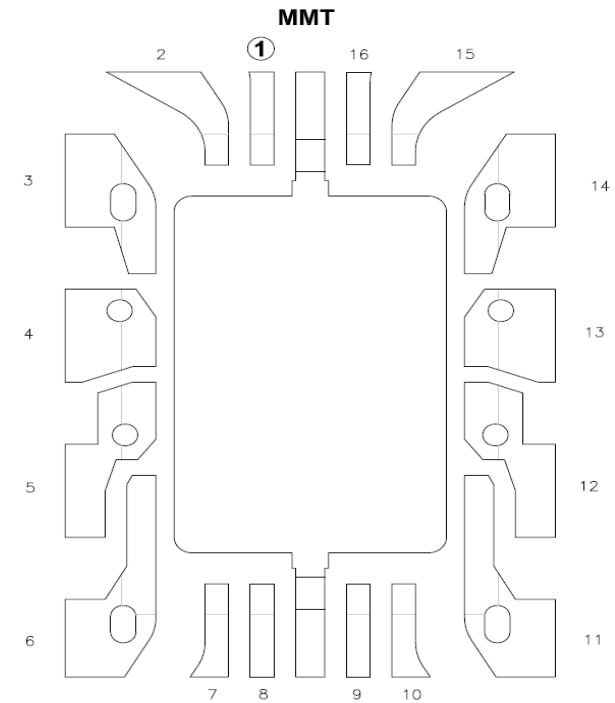
## Pre Change



Lead frame paddle size

140 x 170 mils

## Post Change



Lead frame paddle size

150 x 230 mils



**MICROCHIP**

**QUALIFICATION REPORT SUMMARY**  
RELIABILITY LABORATORY

**PCN #: ASER-27FWWD026**

**Date:**  
**September 06, 2021**

**Qualification of MMT as a new assembly site for TC500CPE,  
TC500ACPE and TC500CPE519 catalog part numbers (CPN)  
available in 16L PDIP (.300in) package.**



## **MICROCHIP** **PACKAGE QUALIFICATION REPORT**

**Purpose** Qualification of MMT as a new assembly site for TC500CPE, TC500ACPE and TC500CPE519 catalog part numbers (CPN) available in 16L PDIP (.300in) package.

**CN** ES358791

**QUAL ID** R2100713 rev. A

**MP CODE** Y20071D6XA00

**Part No.** TC500CPE

**Bonding No.** BDM-002953 Rev. A

**CCB No.** 4713

### **Package**

**Type** 16L PDIP

**Package size** 300 mils

### **Lead Frame**

**Paddle size** 150 x 230 mils

**Material** C194

**Surface** Ag

**Process** Stamped

**Lead Lock** Yes

**Part Number** 10101610

### **Material**

**Die Attach** CRM-1064L

**Wire** Au wire

**Mold Compound** GE800

**Plating Composition** Matte Sn





# MICROCHIP PACKAGE QUALIFICATION REPORT

## Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-221102240.000	TMPE221424513.400	2123MY Y
MMT-221102405.000	TMPE221424513.400	2123V5Q
MMT-221102406.000	TMPE221424513.400	2123VHC

## Result

Pass     Fail     \_\_\_\_\_

16L PDIP (.300") assembled by MMT (ALPH) pass reliability test per QCI-39000.

# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>Electrical Test</b>	<b>Electrical Test:</b> +25°C System: TTS1000	JESD22- A113	693(0)	693		Good Devices
<b>Temp Cycle</b>	<b>Stress Condition:</b> -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H Inspection: External crack inspection all units under 40X Optical magnification	JESD22- A104		231		
	<b>Electrical Test:</b> +25°C System: TTS1000		231(0)	0/231	Pass	77 units / lot
	<b>Bond Strength:</b> Wire Pull (> 4.0 grams) Bond Shear (18.00 grams)		15 (0)	0/15	Pass	
			15 (0)	0/15	Pass	
<b>UNBIASED-HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22- A118		231		
	<b>Electrical Test:</b> +25°C System: TTS1000		231(0)	0/231	Pass	77 units / lot

# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. <b>Bias Volt:</b> 5.5 Volts System: HAST 6000X  <b>Electrical Test:</b> +25°C System: TTS1000	JESD22-A110	231(0)	231 0/231	Pass	77 units / lot
<b>High Temperature Storage Life</b>	<b>Stress Condition:</b> Bake 175°C, 504 hrs System: SHEL LAB  <b>Electrical Test:</b> +25°C System: TTS1000	JESD22-A103	45(0)	45 0/45	Pass	45 units
<b>Solderability Temp 215°C</b>	<b>Steam Aging:</b> 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	
<b>Solderability Temp 245°C</b>	<b>Steam Aging:</b> Temp 93°C,8Hrs System: SAS-3000 <b>Solder Dipping:</b> Solder Temp.245°C Solder material: Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	JESD22B-102E	22 (0)	22 22 0/22	Pass	
<b>Wire sweep</b>	Wire sweep Inspection 15 Wires / lot	-	45(0) Wires	0/45	Pass	
<b>Bond Strength Data Assembly</b>	Wire Pull (> 4.0 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	