

TMCE32 Conductive Polymer Aluminum Solid Capacitors

(mm)

1.Scope: This specification covers polarized aluminium electrolytic capacitors with solid electrolyte for use in electronic equipment.

2. Operating Temperature Range: -55 °C~+105 °C

3. Style: Radial Leaded

Voltage:6.3V Capacitance:1000uF/820uF

Tolerance:±20%

4. Lead Forming Type , Lead Spacing and Lead Length Lead Length Lead Spacing Lead Forming Type (mm)

	Long Lead	3.5	Long Lead					
	Taping	5.0	Long Lead					
	Cutting	3.5	3.3					
	Outling	3.5	3.1					
5. Dimension:8X8mm								
6.	6. Marking							
Unless otherwise specified capacitor shall be clearly marked the following items on its aluminium								
that enamel by nylon laminate.								

(1) Rated Voltage (2) Rated Capacitance

(4) Series (5) Date Code

(3) Negative Polarity

ÛPS117 1000 - Negative Polarity -- Rated Capacitance - Rated Voltage

Series -

- Code

ITEM

Rated Voltage (WV)

SurgeVoltage

Nominal

WV (V.DC)

SV (V.DC)

< Condition >

Measuring Frequency

Measuring Temperature

Measuring Voltage

6.3

1

2

Conductive Polymer Aluminum Solid Capacitors TMCE32 Table - 1 PERFORMANCE

PERFORMANCE

: 120 Hz ±20%

: 25 ± 10 °C

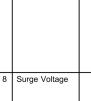
: Not more than 0.5 Vrms +2.1 \sim 2.5 V.DC



< Criteria > $820\mu F~(\pm 20\%)~1000\mu F~(\pm 20\%)$

		820με (±20%) 1000με (±20%)						
3	Tanδ	< Condition >						
	of loss angle	See ITEM2, Nominal Capacitance, for measuring frequency, voltage and						
	(Tanδ)	temperature.						
		< Criteria >						
		WV (V.dc) 6.3						
		Tan δ 0.12						
4	ESR	< Condition >						
		Measuring Frequency : 100 ~ 300 kHz ±10%						
		Measuring Voltage : Not more than 0.5 Vrms +2.1 ~ 2.5 V.DC						
		Measuring Temperature : 25 ± 10 °C						
		1000μF 820μF						
		$7m\Omega$ Max $9m\Omega$ Max						
5	Leakage	< Condition >						
	Current	The rated voltage shall be applied between terminals of capacitor such that the terminal						
		voltage will reach the rated voltage with in two minute and the leakage current shall be						
		measured at following time after the voltage has reached the rated voltage across a						
		1000 \pm 10 Ω series protection resistor. Then the current value shall not exceed value						
		calculated from following formula.						
		< Criteria > Rated 6.3 V / 1000 μF 6.3 V / 820 μF						
		LC (2 Minute) 1260 μA 1033 μA						
		200 μπ 1000 μπ						
	TOPMAY	TMCE32 Conductive Polymer Aluminum Solid Capacitors						
		TIMOLOZ Obriductive Folymor Administra Colla Capacitors						

Step 1 : Measure impedance at $\,$ +20 ±2 °C , 100 kHz $\pm20\%$ Step 2 : Measure impedance at $\,$ -25 ± 2 °C , 100 kHz $\pm 20\%$ Step 3 : Measure impedance at $\,$ -55 ± 2 °C , 100 kHz $\pm 20\%$



Temperature Characteristics

7

Endurance

(Load Life Test)

<Condition>

following values.

<Condition>

<Criteria>

Tanδ

ESR

Capacitance Change

for 1~2 hours before measurement.

Leakage Current

<Condition>

<Criteria>

Z(-25 °C)/Z(+20 °C)

Z(-55 °C)/Z(+20 °C)

Capacitors shall be applied the surge voltage continuously through 1000 $\!\Omega$ resistor in series for 30 ± 5 seconds in every 6 ± 0.5 minutes at 15~35 °C. Procedure shall be repeated 1000 times. Then the capacitors shall be left under normal humidity

Impedance ratio of the -25 °C and -55 °C values to the +20 °C value shall be not exceed the

Capacitors shall be applied the rated voltage continuously through 1000 $\!\Omega\!$ series protective resistor at 105± 2 °C for 2000 $_{0}^{^{+48}}$ hours. After the test and returned in standard condition

Within ± 20 % of the initial value

Not more than the specified value

Not more than 150% of the specified value

Not more than 150% of the specified value

[C_R : Nominal Capacitance(μF)]

1.15

1.25

for 1~2 hours, and the capacitor shall meet the following requirements.

		Leakage Current	Not more than the specified value			
		Capacitance Change	Within ±20% of the initial value			
		Tanδ	Not more than 150% of the specified value			
	[ESR Not more than 150% of the specified value				
Appearance			Notable changes shall not be found			
		This test simulates over	ervoltage at abnormal situations, and not be hypothesizing that			
		overvoltage is always a	applied.			
4	ТОРМАУ	тмсез	2 Conductive Polymer Aluminum Solid Capacitor			
9	Vibration Test	<condition></condition>				
١			done out in 3 AXIS for 2 hours each (total 6 hours) as below. Fix lead			
		Testing shall be o	done out in 3 AXIS for 2 hours each (total 6 hours) as below. Fix lead			
		Testing shall be o	more than 4mm from the body, use mounting device separately for			
		Testing shall be of wire at a point not the one with a dian	more than 4mm from the body, use mounting device separately for neter 12.5mm and greater or with a length 25mm and longer.			
		Testing shall be divided at a point not the one with a diant of Vibration	more than 4mm from the body, use mounting device separately for neter 12.5mm and greater or with a length 25mm and longer. on frequency range : $10\sim55\text{Hz}$			
		Testing shall be down wire at a point not the one with a diant Vibration	more than 4mm from the body, use mounting device separately for meter 12.5mm and greater or with a length 25mm and longer. on frequency range : $10\sim55\text{Hz}$ p peak amplitude : 1.5mm			
		Testing shall be co wire at a point not uthe one with a dian Vibratic Peak to Sweep	more than 4mm from the body, use mounting device separately for neter 12.5mm and greater or with a length 25mm and longer. on frequency range : $10\sim55\text{Hz}$			
		Testing shall be cowire at a point not the one with a dian Vibratic Peak to Sweep	more than 4mm from the body, use mounting device separately for meter 12.5mm and greater or with a length 25mm and longer. on frequency range: 10 ~ 55 Hz o peak amplitude: 1.5 mm rate: 10~55~10 Hz, about 1 min.			
		Testing shall be co wire at a point not uthe one with a dian Vibratic Peak to Sweep	more than 4mm from the body, use mounting device separately for meter 12.5mm and greater or with a length 25mm and longer. on frequency range : $10\sim55\text{Hz}$ p peak amplitude : 1.5mm			
		Testing shall be cowire at a point not the one with a dian Vibratic Peak to Sweep	more than 4mm from the body, use mounting device separately for meter 12.5mm and greater or with a length 25mm and longer. on frequency range: 10 ~ 55 Hz o peak amplitude: 1.5 mm rate: 10~55~10 Hz, about 1 min.			
		Testing shall be cowire at a point not in the one with a diant the one with a compact of the one o	more than 4mm from the body, use mounting device separately for meter 12.5mm and greater or with a length 25mm and longer. on frequency range: 10 ~ 55 Hz o peak amplitude: 1.5 mm rate: 10~55~10 Hz, about 1 min. Measured value shall be stable. (The time for one			
		Testing shall be cowire at a point not in the one with a diant the one with a compact of the one o	more than 4mm from the body, use mounting device separately for meter 12.5mm and greater or with a length 25mm and longer. on frequency range: 10 ~ 55 Hz o peak amplitude: 1.5 mm rate: 10~55~10 Hz, about 1 min. Measured value shall be stable. (The time for one end to the other of the vibration frequency within last 30 minutes at direction.)			
		Testing shall be of wire at a point not in the one with a diant the one with a diant the one with a diant peak to Sweep <criteria> Capacitance (During test)</criteria>	more than 4mm from the body, use mounting device separately for meter 12.5mm and greater or with a length 25mm and longer. on frequency range: 10 ~ 55 Hz o peak amplitude: 1.5 mm rate: 10~55~10 Hz, about 1 min. Measured value shall be stable. (The time for one end to the other of the vibration frequency within last 30 minutes at direction.)			
		Testing shall be of wire at a point not in the one with a diant the one with a diant the one with a diant shall be of the one with a diant shall be of the one with a diant shall be of the one with a point shall be of the one with a diant shall be of the one with a	more than 4mm from the body, use mounting device separately for meter 12.5mm and greater or with a length 25mm and longer. on frequency range: 10 ~ 55 Hz opeak amplitude: 1.5 mm rate: 10~55~10 Hz, about 1 min. Measured value shall be stable. (The time for one end to the other of the vibration frequency within last 30 minutes at direction.) mge Within ±5% of the initial value			
10	Solderability	Testing shall be of wire at a point not in the one with a diant the one with a diant the one with a diant shall be of the one with a diant shall be of the one with a diant shall be of the one with a point shall be of the one with a diant shall be of the one with a	more than 4mm from the body, use mounting device separately for meter 12.5mm and greater or with a length 25mm and longer. on frequency range: 10 ~ 55 Hz opeak amplitude: 1.5 mm rate: 10~55~10 Hz, about 1 min. Measured value shall be stable. (The time for one end to the other of the vibration frequency within last 30 minutes at direction.) mge Within ±5% of the initial value			
	Solderability Test	Testing shall be of wire at a point not in the one with a diant the one with a diant the one with a diant sweep of the content	more than 4mm from the body, use mounting device separately for meter 12.5mm and greater or with a length 25mm and longer. on frequency range: 10 ~ 55 Hz opeak amplitude: 1.5 mm rate: 10~55~10 Hz, about 1 min. Measured value shall be stable. (The time for one end to the other of the vibration frequency within last 30 minutes at direction.) mge Within ±5% of the initial value			

(1) Solder : Sn / 3.0 Ag / 0.5 Cu (Weight %) (2) Flux : Rosin 25%, IPA 75%

> Solder Temp Immersion depth

Immersion Time

Wetting must occure over at least 95 % of the solder immersion surface.

According to the standard of EIAJ ED-4701 where test conditions as.

1. Material of solder : Sn / 3.0 Ag / 0.5 Cu (weight %) 2. Test A: Flow Soldering (Party heating)

3. Test condition: Take a capacitor subjected to the above pre-treatment, leave it for at least 2 hours at room temperature, and then, immersion for $3\sim5$ seconds in the

235 ± 5 °C

 $2 \, \text{m} \, / \, \text{m}$

3 seconds



Solder Heat

Resistance

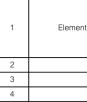
<Criteria>

<Condition>

For \leq 10 seconds to 1.5---2.0 m/m depth from the body of capacitor or apply To 260 +/-3 °C for 5 seconds 2 times.

Terminal of the capacitor shall be immersed into solder bath at 260 +/-3 °C

	TOPMAY	TMCE32 Cond	ductive I	Polymer Alumir	num Solid Capacit	ors	
Т		<criteria></criteria>					
		After test, the capacitor shall be left for 1-2 hours under the room temperature					
1		and normal humility I	before measurement.				
1		Leakage Current		Not more than the	specified value		
1		Capacitance		Within +/- 10 % of	the initial value		
1		Tanδ		Not more than the	specified value		
1		ESR		Not more than the	specified value		
		Appearance		Notable changes	shall not be found		
†	Resistance to	<condition></condition>					
1	Damp Heat	Humidity Test:					
ŀ	(Steady State)	Capacitor shall be exposed f	or 1000 ±	24 hours in an atm	osphere of 90~95% R.I	Н.	
١		at 60 ± 2 °C, the characteristic	change s	hall meet the follow	ing requirement.		
١		After test, the capacitor shall l	be left for	1-2 hours under the	room temperature		
1		and normal humility before measurement.					
١		<criteria></criteria>					
١		Capacitance Change Within ±20% of initial value					
١		Tanδ	Not more than 150% of the specified value				
1		ESR	Not more than 150% of the specified value Not more than the specified value				
1		Leakage Current					
		Appearance	Notable changes shall not be found				
+	Terminal	<condition></condition>					
1	Strength	Tensile Strength of Terminal	ls				
Saerigai		The body of capacitor shall be fixed and the tensile force of following table shall be					
1		applied to the terminal in lead out direction of the terminal for 10±1seconds.					
2. Bending Strenght of Terminals							
١		The body of capacitor shall be held in such a way that the ragular lead out axis of leadwire					
terminal becomes vertical. The weight of following table shall be suspended for terminal. In this condition, after the body of sample is bent through				-			
be returned to the original position. Next the body shall be reve							
١		and again returned to the original position.					
١		Diameter of lead		Tensile force	Bending force		
				N(kgf)	N(kgf)		
		0.5 mm and less		5(0.51)	2.5(0.25)		
		0.6 mm to 0.8 mm		10(1.0)	5(0.51)		
		<criteria></criteria>		1			
		Notable changes shall not be	e found , a	s breakage or loos	eness in the terminal.		
- 1							



8. Table -2 Standard Ratings

No.

7. Construction and Material Details

(5) Case

1 Element

2 Rubber

(4) Lead wire

Component

Aluminum Tab

Lead wire

Case

Anode Foil

Cathode Foil

Separator

Adhesive Tape

3 Aluminum Tap

TMCE32 Conductive Polymer Aluminum Solid Capacitors

TMCE32 Conductive Polymer Aluminum Solid Capacitors

Separator

AL. Foil ⊝

AL. Foil

Lead wire

Materials

Aluminum

Aluminum

Manila Hemp

PPS

Rubber

Aluminum

Tinned Lead

Laminate Coated Aluminum

Adhesive Tape

	Rated	Rated	Case Size	ESR	Rated	Tanδ	Leakage
Part Number	Voltage	Capacitance	φD×L	100 KHz~to 300KHz	Ripple Current	Tano	Current
	(Vdc)	(µF)	(mm)	$(m\Omegamax)$	(mArms/105°C100KHz)		(μA)
TMCE32-102M6.3VP3.5B	6.3	1000	8×8	7	6100	0.12	1260
TWIOLD2-102W0.3VF3.3B	(OJ)	1000				0.12	1200
TMCE32-821M6.3VP3.5B	6.3	820	8×8	9	5700	0.12	1033
TMCE32-82 TM0.3VP3.3B	(OJ)	020			5700		1033
		•	•				

Code: NN Coated Case XEU G 1-9 8+1.0max	φ d0.6±0.05	-⊕ ⊕	3340.6
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