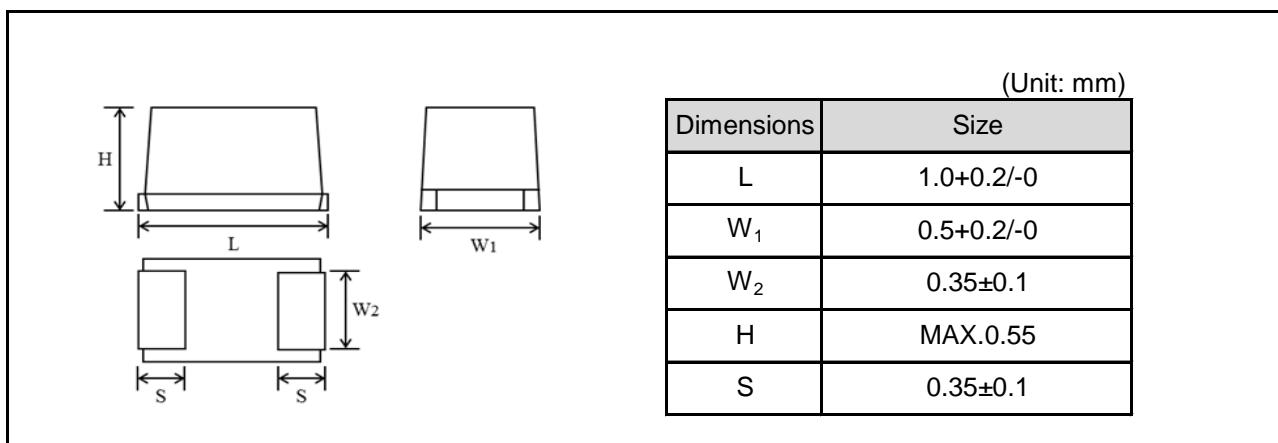


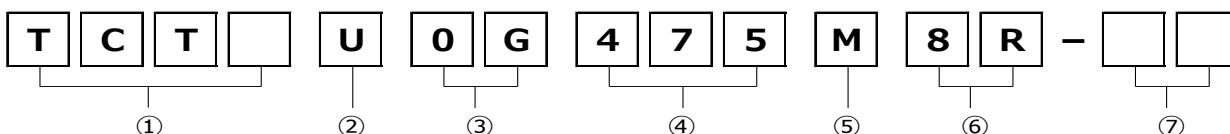
● Features

- 1) Bottom electrode configuration results in significantly greater compactness.
- 2) Filet formation enables easy visibility after mounting.
- 3) Ideal for noise removal on power supply lines with limited space.
- 4) Eco-friendly halogen-free products.

● Dimensions



● Part No. Explanation



④ Nominal capacitance
Nominal capacitance in pF in 3 digits:
2 significant figures followed by the figure representing the number of 0's.

⑤ Capacitance tolerance
M : ±20%

⑥ Taping
8: Tape width
R: Positive electrode on the side opposite to sprocket hole

⑦ Discrimination code

● Rated table

Capacitance (μ F)	Rated voltage (V.DC)									Impedance(Ω)
	2.5	4	6.3	10	16	20	25	35	50	
0.33 (334)						30				
0.47 (474)			35							
1.0 (105)			20							
2.2 (225)			20							
3.3 (335)										
4.7 (475)		20	25							
6.8 (685)										
10 (106)										
15 (156)	25									
22 (226)										
33 (336)										
47 (476)										
68 (686)										
100 (107)										

● Marking

The indications listed below should be given on the surface of a capacitor.

- (1) Polarity: The polarity should be shown by bar. (on the anode side)
- (2) Rated DC voltage: A voltage code is shown as below table.
- (3) Capacitance: A capacitance code is shown as below table.

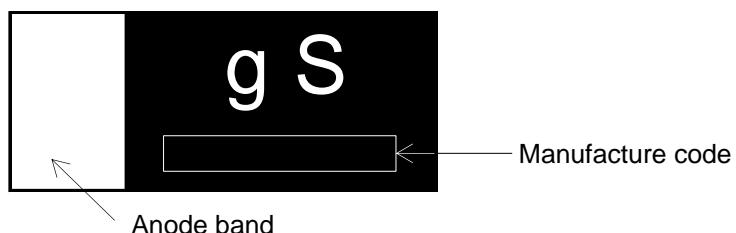
Voltage Code	Rated DC Voltage (V)
e	2.5
g	4
j	6.3
A	10
C	16
D	20
E	25
V	35
H	50

Capacitance Code	Nominal Capacitance (μ F)	Capacitance Code	Nominal Capacitance (μ F)
E	0.15	e	15
N	0.33	j	22
S	0.47	n	33
A	1.0	s	47
E	1.5	w	68
J	2.2	a	100
N	3.3	e	150
S	4.7	j	220
W	6.8	n	330
a	10	s	470

Visual typical example
voltage code and capacitance code are variable with parts number.

[TCT series U case]

EX.) g S
(1) voltage code
(2) capacitance code



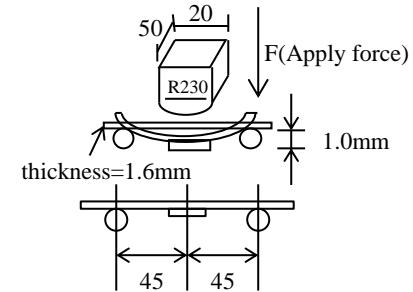
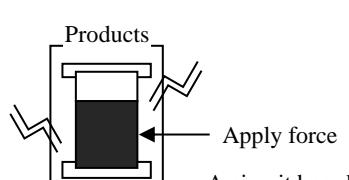
● Characteristics

Item	Performance	Test conditions (based on JIS C 5101-1 and JIS C 5101-3)
Operating Temperature	-55°C~+125°C	Voltage reduction when temperature exceeds +85°C
Maximum operating temperature with no voltage derating	+85°C	
Rated voltage (V.DC)	Refer to " Standard list ".	at 85°C
Category voltage (V.DC)	Refer to " Standard list ".	at 125°C
Surge voltage (V.DC)	Refer to " Standard list ".	at 85°C
DC Leakage current	Shall be satisfied the value on " Standard list ".	As per 4.9 JIS C 5101-1 As per 4.5.1 JIS C 5101-3 Voltage : Rated voltage for 5min
Capacitance tolerance	Shall be satisfied allowance range. ±20%	As per 4.7 JIS C 5101-1 As per 4.5.2 JIS C 5101-3 Measuring frequency :120 ± 12Hz Measuring voltage :0.5Vrms + 1.5V.DC Measuring circuit :DC Equivalent series circuit
Tangent of loss angle (Df,tanδ)	Shall be satisfied the value on " Standard list ".	As per 4.8 JIS C 5101-1 As per 4.5.3 JIS C 5101-3 Measuring frequency :120 ± 12Hz Measuring voltage :0.5Vrms + 1.5V.DC Measuring circuit :DC Equivalent series circuit
Impedance	Shall be satisfied the value on " Standard list ".	As per 4.10 JIS C 5101-1 As per 4.5.4 JIS C 5101-3 Measuring frequency :100 ± 10kHz Measuring voltage :0.5Vrms or less Measuring circuit :DC Equivalent series circuit
Resistance to Soldering heat	Appe- arance	There should be no significant abnormality. The indications should be clear.
	L.C.	Less than 200% of initial limit.
	ΔC/C	Within +20/-30% of initial value.
	DF (tanδ)	Less than 200% of initial limit.
Temperature cycle	Appe- arance	There should be no significant abnormality. The indications should be clear.
	L.C.	Less than 200% of initial limit.
	ΔC/C	Within ±30% of initial value.
	DF (tanδ)	Less than 200% of initial limit.

	Temp.	Time
1	-55±3°C	30±3min
2	Room Temp.	3min or less
3	125±2°C	30±3min
4	Room Temp.	3min or less

After the specimens, leave it at room temperature for over 24h and then measure the sample.
Initial value for ΔC/C shall be the value after mounted.

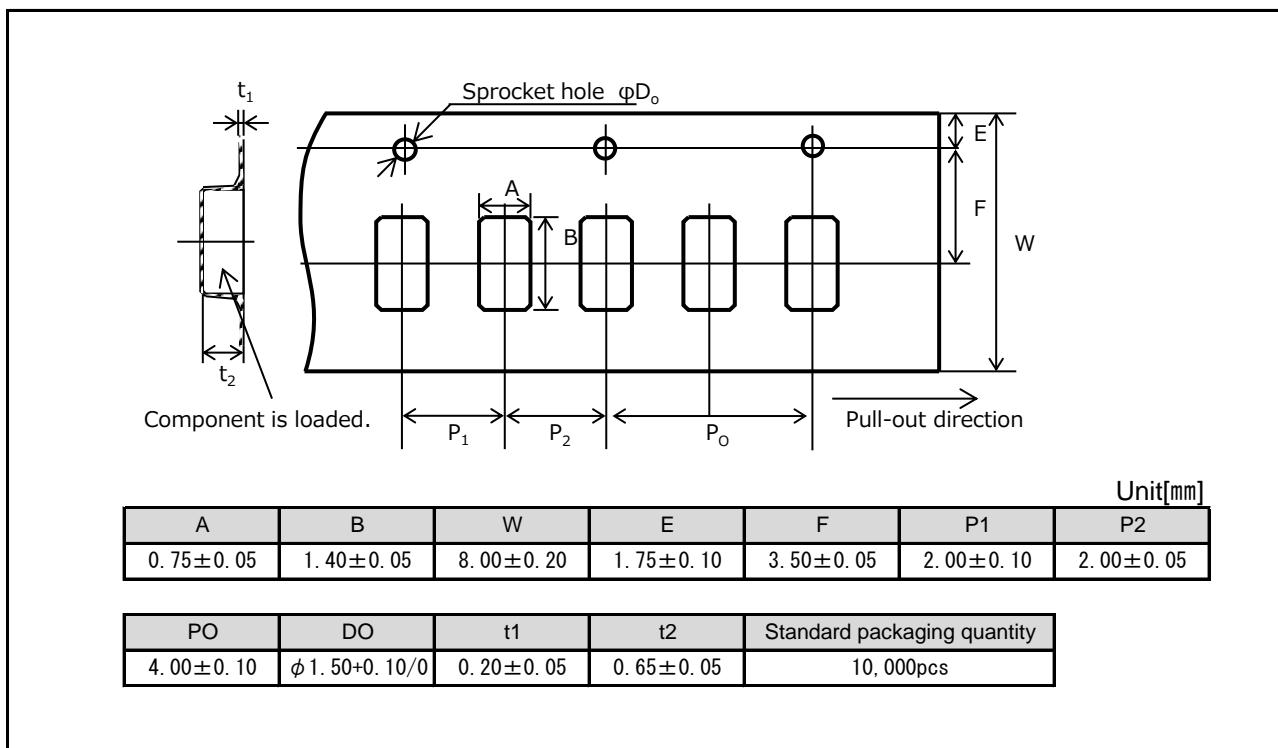
Item		Performance	Test conditions (based on JIS C 5101-1 and JIS C 5101-3)
Moisture resistance	Appe- arance	There should be no significant abnormality. The indications should be clear.	As per 4.22 JIS C 5101-1 As per 4.12 JIS C 5101-3 After leaving the sample under such atmospheric condition that the temperature and humidity are $60\pm2^{\circ}\text{C}$ and 90 to 95% RH, respectively, for 500+12/0h leave it at room temperature for over 24h and then measure the sample.
	L.C.	Less than 1000% of initial limit.	Initial value for $\Delta\text{C/C}$ shall be the value after mounted.
	$\Delta\text{C/C}$	Within $\pm20\%$ of initial value.	
	DF ($\tan\delta$)	Less than 300% of initial limit.	
Temperature Stability	Temp. : -55°C		As per 4.29 JIS C 5101-1
	$\Delta\text{C/C}$	Within 0/-30% of initial value.	As per 4.13 JIS C 5101-3 Initial value for $\Delta\text{C/C}$ shall be the value after mounted.
	DF ($\tan\delta$)	Shall be satisfied the value on " Standard list "	
	L.C.	—	
	Temp. : $+85^{\circ}\text{C}$		
	$\Delta\text{C/C}$	Within $+15/0\%$ of initial value.	
	DF ($\tan\delta$)	Shall be satisfied the value on " Standard list "	
	L.C.	Less than 1000% of initial limit.	
	Temp. : $+125^{\circ}\text{C}$		
	$\Delta\text{C/C}$	Within $+20/0\%$ of initial value.	
	DF ($\tan\delta$)	Shall be satisfied the value on " Standard list "	
	L.C.	Less than 1250% of initial limit.	
Surge voltage	Appe- arance	There should be no significant abnormality. The indications should be clear.	As per 4.26JIS C 5101-1 As per 4.14JIS C 5101-3 Apply the specified surge voltage via the serial resistance of $1\text{k}\Omega$ over 5 ± 0.5 min. for 30 ± 5 s. each time in the atmospheric condition of $85\pm2^{\circ}\text{C}$. Repeat this procedure 1,000 times. After the specimens, leave it at room temperature for over 24h and then measure the sample. Initial value for $\Delta\text{C/C}$ shall be the value after mounted.
	L.C.	Less than 200% of initial limit.	
	$\Delta\text{C/C}$	Within $\pm20\%$ of initial value.	
	DF ($\tan\delta$)	Less than 200% of initial limit.	
Loading at High temperature	Appe- arance	There should be no significant abnormality. The indications should be clear.	As per 4.23 JIS C 5101-1 As per 4.15 JIS C 5101-3 After applying the rated voltage for $1000+36/0$ h without discontinuation via the serial resistance of 3Ω or less at a temperature of $85\pm2^{\circ}\text{C}$, leave the sample at room temperature / humidity for over 24h and measure the value. Initial value for $\Delta\text{C/C}$ shall be the value after mounted.
	L.C.	Less than 200% of initial limit.	
	$\Delta\text{C/C}$	Within $+20/-30\%$ of initial value.	
	DF ($\tan\delta$)	Less than 300% of initial limit.	

Item		Performance	Test conditions (based on JIS C 5101-1 and JIS C 5101-3)
Terminal strength	Capacitance	The measured value should be stable.	As per 4.35 JIS C 5101-1 As per 4.9 JIS C 5101-3
	Appearance	There should be no significant abnormality.	A force is applied to the terminal until it bends to 1mm and by a prescribed tool maintains the condition for 5s. (See the figure below)
			
Adhesiveness		The terminal should not come off.	As per 4.34 JIS C 5101-1 As per 4.8 JIS C 5101-3 Apply force of 2N in the two directions shown in the figure below for 10 ± 1 s after mounting the terminal on a circuit board.
			
Dimensions		Refer to "External dimensions".	Measure using a caliper of JIS B 7507 Class 2 or higher grade.
Resistance to solvents		The indication should be clear.	As per 4.32 JIS C 5101-1 As per 4.18 JIS C 5101-3 Dip in the isopropyl alcohol for 30 ± 5 s, at room temperature.
Solderability		3/4 or more surface area of the solder coated terminal dipped in the soldering bath should be covered with the new solder.	As per 4.15.2 JIS C 5101-1 As per 4.7 JIS C 5101-3 Dip speed= 25 ± 2.5 mm / s Pre-treatment (accelerated aging): Leave the sample on the boiling distilled water for 1h. Solder temp. : 245 ± 5 °C Duration : 3 ± 0.5 s Solder : M705 Flux : Rosin 25% IPA 75%
Vibration	Capacitance	Measure value should not fluctuate during the measurement.	As per 4.17 JIS C 5101-1 Frequency : 10 to 55 to 10Hz/min.
	Appearance	There should be no significant abnormality.	Amplitude : 1.5mm Time : 2h each in X and Y directions Mounting : The terminal is soldered on a print circuit board.

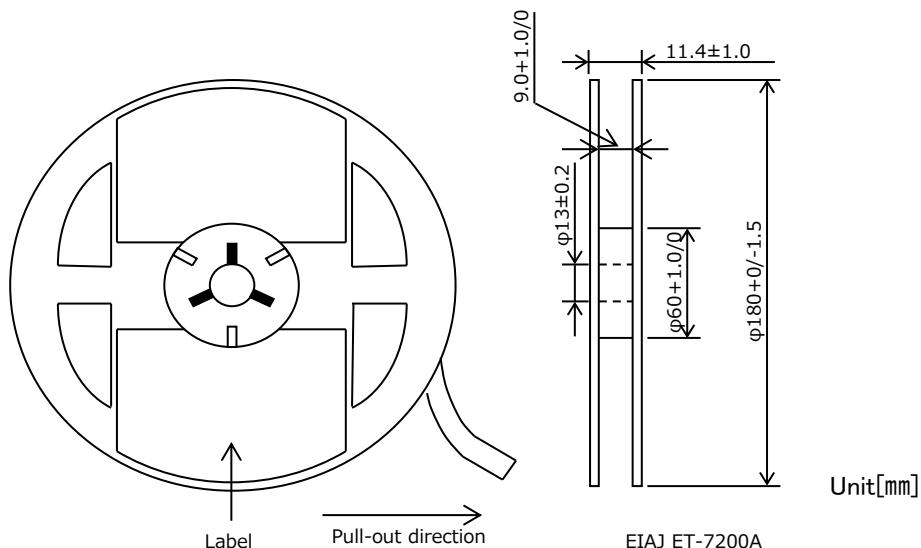
● Standard products list

Part No.	Rated voltage 85°C (V)	Category voltage 105°C (V)	Surge voltage 85°C (V)	Cap. 120Hz (μF)	Tolerance (%)	Leakage current 25°C 1WV 5min (μA)	tanδ 120Hz			Impedance 100kHz (Ω)
							-55°C (%)	25°C (%)	105°C (%)	
TCTU0E156M8R-V1	2.5	1.6	2.5	15	±20	7.5	90	50	60	25
TCTU0G475M8R	4	2.5	5	4.7	±20	1.9	35	20	25	20
TCTU0J474K8R	6.3	4	8	0.47	±10	0.5	35	20	25	35
TCTU0J105K8R	6.3	4	8	1	±10	0.7	35	20	25	20
TCTU0J225M8R	6.3	4	8	2.2	±20	1.4	35	20	25	20
TCTU0J475M8R-02	6.3	4	8	4.7	±20	3.0	90	50	60	25
TCTU1D334M8R	20	13	26	0.33	±20	0.7	35	20	25	30

- Packaging specifications



- Reel dimensions



- Damp proof package

① One reel is packed in aluminum bag.

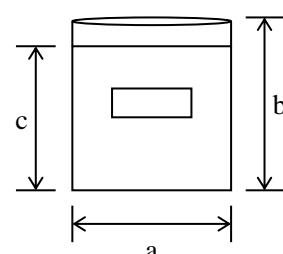
The size of aluminum bag is 240(a) x 250(b)mm.

The size up to 230(c)mm is to zipper.

② A desiccant is packed with a reel.

③ The aluminum bag is heat-sealed.

④ The label of the same as the label on the reel is placed on the aluminum bag.



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