

SMD Chip Tantalum Capacitor

How To Order:

Series: TC Part No.

<u>TC</u>	<u>A</u>	<u>106</u>	<u>K</u>	<u>160</u>
Series Chip Tantalum Capacitor	Case A B C D E	Capacitance 10PF=100 100PF=101 1000PF=102 1NF=1000PF=102 1UF=1000000PF=105	Tolerance K=10% M=20%	Voltage 160=16V 500=50V 101=100V

Description: Tantalum 10uF 16V A case 10%

Note:

The normal packing of Tantalum Chip Cap. is Taped/Reel.

Quantity of A 、 B case is 2000pcs/reel.

Quantity of C 、 D case is 500pcs/reel.

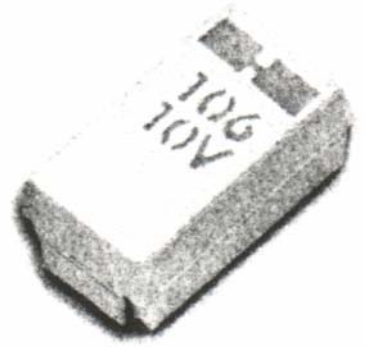
Quantity of E case is 400pcs/reel.

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Tantalum Electrolytic Capacitors Surface Mount Type

■ Features

- General purpose surface mount type
- Compact size & wide CV range.
- High solderability & stable characteristics for soldering
- Compatible with all popular automatic pick and place equipment.

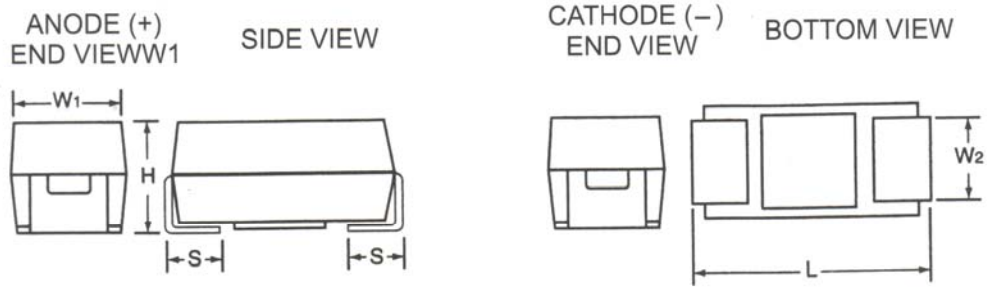


■ SPECIFICATION:

Item	Performance Characteristics							
Operating Temperature Range	-55 to +125°C							
Rated Working Voltage Range	4 to 50 V DC							
Nominal Capacitance Range	0.1 to 220 μ F							
Capacitance Tolerance	$\pm 20\% \pm 10\%$ (120Hz, +20°C)							
Leakage Current	$1 \leq 0.01CV$ or $0.5 [\mu A]$ Whichever is greater measured after 2 minutes application of rated working voltage at +20°C							
tan δ (120Hz, +20°C)	0.04 max. for $\leq 3.3 \mu F$							
	0.06 max. for 4.7 to 68 μF .							
	0.08 max. for 100 to 220 μF							
Characteristics at High and Low Temperature	-55°C	Capacitance change	$\pm 12\%$ of initial measured value at +20°C					
	+125°C	Leakage current	$\leq 12.5\%$ of initial measured value					
		Capacitance change	$\pm 15\%$ of initial measured value at +20°C					
Moisture Resistance	Test conditions Relative humidity : 90 to 95% without load Ambient temperature : +40°C Duration : 500 hours Post test requirements at +20°C Leakage current : \leq Initial specified value Capacitance change : $\pm 10\%$ of initial measured value tan δ : \leq Initial specified value							
Endurance	Item \ Conditions		Derating	Rating				
	Duration		2000 hours	2000 hours				
	Ambient temperature		+125°C	+85°C				
	Applied voltage		Derated working voltage	Rated working voltage				
	Source impedance		1 Ω/V	1 Ω/V				
	Derating voltage + 125°C							
	Working voltage [V] DC	4	6.3	10	16	20	25	35
Derating voltage[V] DC	2.5	4	6.3	10	13	16	22	32
Post test requirements at +20°C								
Leakage current : $\leq 125\%$ of initial specified value								
Capacitance change : $\pm 10\%$ of initial measured value								
tan δ : \leq Initial specified value								
Shelf Life	Test conditions Duration : 2000 hours Ambient temperature : +125°C Applied voltage : (none)		Post test requirements at +20°C Same limits for "Endurance".					
Solder Heat Resistance	The capacitor shall withstand dipping into solder bath for 5 ± 1 seconds at $260 \pm 5^\circ C$							

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Tantalum Capacitor CHIP TYPE OUTLINE DRAWINGS



Dimensions Millimeters (Inch)

Case Size	$L \pm 0.2$ (0.008)	$W_1 \pm 0.2$ (0.008)	$H \pm 0.2$ (0.008)	$S \pm 0.3$ (0.012)	$W_2 \pm 0.2$ (0.004)
A	3.2 (0.126)	1.6 (0.063)	1.6 (0.063)	0.8 (0.031)	1.2 (0.047)
B	3.5 (0.137)	2.8 (0.110)	1.9 (0.075)	0.8 (0.031)	2.2 (0.087)
C	6.0 (0.236)	3.2 (0.126)	2.5 (0.098)	1.3 (0.051)	2.2 (0.087)
D	7.3 (0.287)	4.3 (0.169)	2.8 (0.110)	1.3 (0.051)	2.4 (0.094)
E	7.3 (0.287)	4.3 (0.169)	4.10 (0.162)	1.3 (0.051)	2.4 (0.094)

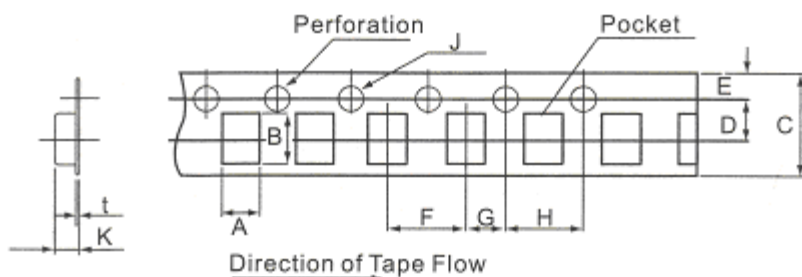
Rated Voltage, Capacitance of Capacitors

Rated Voltage (V)	4	6.3	10	16	20	25	35	50
Capacitance (μF)	Case size							
0.10 (104)							A	A
0.15 (154)							A	B
0.22 (224)							A	B
0.33 (334)							A	B
0.47 (474)						A	AB	C
0.68 (684)					A	A	B	C
1.0 (105)				A	A	AB	B	C
1.5 (155)			A	A	AB	B	C	D
2.2 (225)		A	A	AB	B	C	C	D
3.3 (335)	A	A	AB	AB	B	C	C	D
4.7 (475)	A	AB	AB	B	C	CD	CD	D
6.8 (685)	A	AB	AB	BC	C	CD	D	
10 (106)	AB	AB	ABC	BC	CD	D	D	
15 (156)	B	BC	C	BC	D	D		
22 (226)	BC	C	C	CD	D			
33 (336)	BC	CD	CD	D	D			
47 (476)	C	CD	D	D				
68 (686)	CD	CD	D					
100 (107)	CD	B/CD	D					
150 (157)	D	D						
220 (227)	D	D						
1000 (108)	E	E						

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Dimensions of the carrier tape and standard parts quantity per reel.

■ Dimensions



(Unit: mm)

Case Size	A	B	C	D	E	F	G	H	J	K	t	Quantity Per Reel
A	1.83	3.57	8	3.5	1.75	4	2	4	1.5	1.87	0.2	2000
B	3.15	3.77	8	3.5	1.75	4	2	4	1.5	2.22	0.2	2000
C	3.45	6.4	12	5.5	1.75	8	2	4	1.5	2.92	0.3	500
D	4.48	7.62	12	5.5	1.75	8	2	4	1.5	3.22	0.3	500
E	4.5	7.5	12	5.5	1.75	8	2	4	1.5	4.50	0.3	400

Inserting Direction (Polarity Orientation)
Polarity L: To be insert with the positive side to the feed hole.

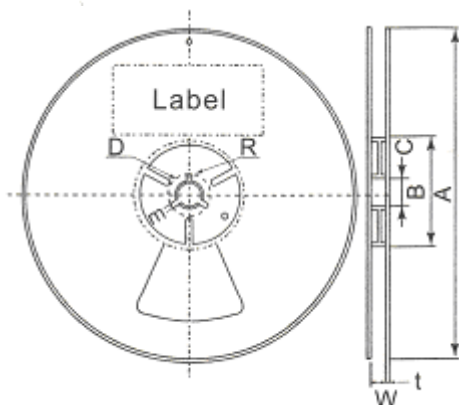


Reel Dimensions

Polarity R: To be insert with the positive side to the feed hole



(Unit: mm)



Tape Leader and Tailer

Tape width	8	12
A_{-3}^0	$\phi 180$	←
B_0^{+1}	$\phi 60$	←
$C \pm 0.2$	$\phi 13$	←
$D \pm 0.8$	$\phi 21$	←
$E \pm 0.5$	2.0	←
$W \pm 0.3$	9.0	13.0
$t \pm 0.4$	1.3	←
$R \pm 0.4$	10.5	←

