

SMD Tantalum Capacitors

-55 to +85°C, from 4 to 50V, S to E cases



Specifications

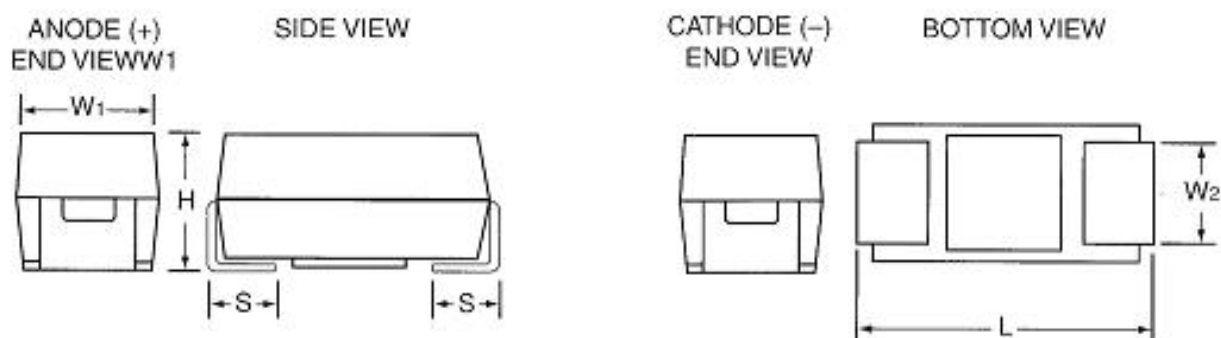
Item	Performance																	
Operating Temperature Range	-55 to+85℃ at rated voltage																	
Rated Working Voltage Range	4 – 50VDC																	
Nominal Capacitance Range	0.1 – 470μ F																	
Capacitance Tolerance	± 10% or 20% (at+20℃ ,120Hz)																	
Leakage Current	Not more than 0.01CV (μ A) or 0.5μ A, whichever is greater.																	
Dissipation Factor (tan δ) (120Hz\+20℃)	0.04 max. for ≤ 1.0μ F, 0.06 max. for 1.5 to 68μ F, 0.08 max. for 100 to 470μ F.																	
Characteristics at High and Low Temperature	<table><tr><td>-55℃</td><td>Capacitance change</td><td>±12% of initial measured value at +20℃</td></tr><tr><td rowspan="2">+105℃</td><td>Leakage current</td><td>≤ 12.5% of initial measured value</td></tr><tr><td>Capacitance change</td><td>±12% of initial measured value at +20℃</td></tr></table>			-55℃	Capacitance change	±12% of initial measured value at +20℃	+105℃	Leakage current	≤ 12.5% of initial measured value	Capacitance change	±12% of initial measured value at +20℃							
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+105℃	Leakage current	≤ 12.5% of initial measured value																
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Moisture Resistance	Test conditions : Relative humidity : 90 to 95% without load, Ambient Temperature : +40℃. Duration : 500 hrs Post test requirements at +20℃ : : Leakage current & Tanδ : ≤ initial specified value Capacitance change : ±10% of initial measured value																	
Endurance	<table><tr><td></td><td>Derating</td><td>Rating</td></tr><tr><td>Duration</td><td>1000 hrs</td><td>1000 hrs</td></tr><tr><td>Ambient Temperature</td><td>+105 ℃</td><td>+85℃</td></tr><tr><td>Applied voltage</td><td>Derated working votlage</td><td>Rated working voltage</td></tr><tr><td>Source impedance</td><td>1Ω / V</td><td>1Ω / V</td></tr></table>				Derating	Rating	Duration	1000 hrs	1000 hrs	Ambient Temperature	+105 ℃	+85℃	Applied voltage	Derated working votlage	Rated working voltage	Source impedance	1Ω / V	1Ω / V
	Derating	Rating																
Duration	1000 hrs	1000 hrs																
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Applied voltage	Derated working votlage	Rated working voltage																
Source impedance	1Ω / V	1Ω / V																
Shelf Life	Test conditions : Duration : 1000hrs., Ambient Temperature : +125℃. Applied voltage : none. Post test requirements at +20℃, same limits for “ Endurance”. Solder Heat Resistance :Withstand dipping into solder bath for 5±1 sec. at 260±5℃.																	

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CINETECH
SYMBOL OF QUALITY

Case outline



Dimension mm (inch)

Case Size	$L \pm 0.2$ (0.008)	$W_1 \pm 0.2$ (0.008)	$H \pm 0.2$ (0.008)	$S \pm 0.2$ (0.008)	$W_2 \pm 0.2$ (0.008)
S	2.0 (0.079)	1.2 (0.047)	1.2 (0.047)	0.5 (0.020)	1.2 (0.047)
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)	4.0 (0.157)	1.3 (0.051)	2.4 (0.094)

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Rated voltage, Capacitance, and Case Size

Voltage	4V	6.3V	10V	16V	20V	25V	35V	50V
0.1 UF					S		A	A
0.15 UF					S		A	A / B
0.22 UF					S		A	B
0.33 UF					S		A	B
0.47 UF				S	S	A	A / B	C
0.68 UF			S	S	S / A	A	A / B	C
1.0 UF		S / A	S / A	S / A	A	A / B	A / B	C
1.5 UF	S	S / A	S / A	S / A	A / B	B	B / C	C / D
2.2 UF	S	S / A	S / A	A / B	A / B	B	B / C	D
3.3 UF	S / A	S / A	S / A	A / B	A / B / C	B / C	B / C / D	D
4.7 UF	S / A	S / A	S / A / B	A / B	A / B / C	B / C	C / D	D / E
6.8 UF	S / A	S / A / B	A / B	A / B / C	B / C / D	C / D	C / D	D
10 UF	A / B	A / B	A / B	A / B / C	C / D	C / D	C / D	E
15 UF	A / B	A / B	B / C	B / C	C / D	C / D	E	
22 UF	A / B	A / B	B / C	B / C / D	C / D	D	E	
33 UF	B / C	B / C	C / D	C / D	D	D / E		
47 UF	B / C	B / C	C / D	C / D	D / E	E		
68 UF	B / C / D	C / D	D	D	D / E			
100 UF	B / C / D	C / D	C / D	D	E			
150 UF	C / D	D	E	E				
220 UF	D	D / E	D / E	E				
330 UF	E	D / E	E					
470 UF	E							

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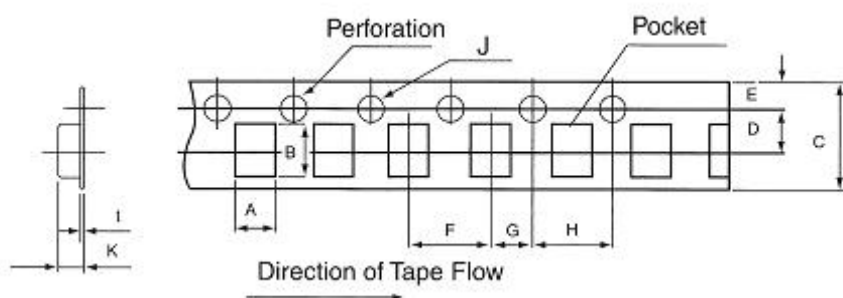
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Part Number System :

TA (1)	10 (2)	M (3)	10 (4)	R (5)
CASE SIZE	CAPACITANCE	TOLERANCE	RATED VOLTAGE	PACKING
TS ---S case	0U1 = 0.1UF	K=±10%	6.3=6.3V	R=Tape/Reel
TA --- A case	0U47 = 0.47UF	M=±20%	10=10V	
TB --- B case	1 = 1UF		16=16V	
TC --- C case	10 = 10UF		25=25V	
TD ---D case	100=100UF		50=50V	
TE --- E case				

Carrier Tape packaging specifications (mm)



Case Size	A±0.1	B±0.1	C±0.3	D±0.1	E±0.1	F±0.1	G±0.1	H±0.1	J±0.1	K max	t	Q'ty/reel
S	1.6	2.4	8.0	3.5	1.75	4.0	2.0	4.0	1.5	2.5	0.2	2,500
A	1.9	3.5	8.0	3.5	1.75	4.0	2.0	4.0	1.5	2.5	0.2	2,000
B	3.1	3.8	8.0	3.5	1.75	4.0	2.0	4.0	1.5	2.5	0.2	2,000
C	3.6	6.4	12.0	5.5	1.75	8.0	2.0	4.0	1.5	3.0	0.3	500
D	4.7	7.7	12.0	5.5	1.75	8.0	2.0	4.0	1.5	3.4	0.3	500
E	4.6	7.6	12.0	5.5	1.75	8.0	2.0	4.0	1.5	4.6	0.3	500