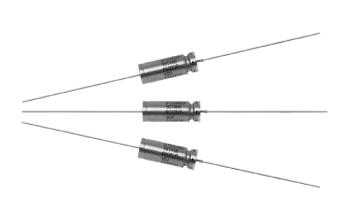


SuperTan[®] Extended (STE) Capacitors, Wet Tantalum Capacitors with Hermetic Seal



FEATURES

Vishay SuperTan® Extended (STE) represents a major breakthrough in wet tantalum capacitor technology. Its unique cathode system, also used in the ST, provides the highest capacitance per unit volume available. The STE combines the



Available

inherent reliability of wet tantalum with the capacitance stability of solid tantalum, and there are no circuit impedance restrictions. The range is exceptionally well suited for low voltage filtering and energy storage applications. Ideal for designs targeting the military and aerospace industry.

The SuperTan® Extended (STE) is housed in an all tantalum, hermetically sealed case and is manufactured to withstand high stress and hazardous environments.

- Axial through-hole terminations: Standard tin/lead (Sn/Pb) 100 % tin (RoHS compliant) available
- Material categorization: For definitions of compliance please see <u>www.vishay.com/doc?99912</u>

Note

* This datasheet provides information about parts that are RoHS-compliant and/or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information/tables in this datasheet for details.

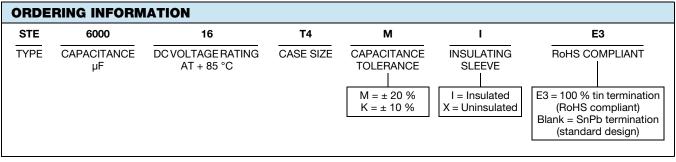
PERFORMANCE CHARACTERISTICS

Operating Temperature: - 55 $^{\circ}$ C to + 85 $^{\circ}$ C (to + 125 $^{\circ}$ C with voltage derating)

Capacitance Tolerance: At 120 Hz, + 25 °C. \pm 20 % standard. \pm 10 % available as special.

DC Leakage Current (DCL Max.): At + 25 °C and above: Leakage current shall not exceed the values listed in the Standard Ratings Tables.

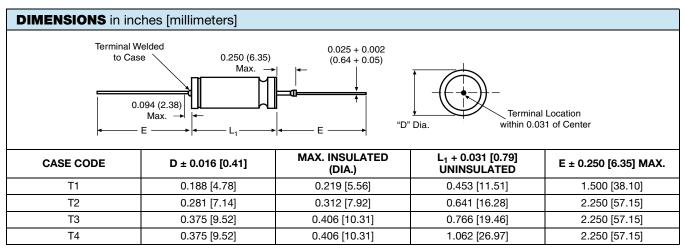
Life Test: Capacitors are capable of withstanding a 2000 h life test at a temperature of + 85 °C at the applicable rated DC working voltage.



Note

Packaging: The use of formed plastic trays for packaging this type of axial lead component is standard.
Tape and reel is not recommended due to the unit weight.





Notes

- Material at egress is tantalum
- Insulation sleeving will lap over the ends of the capacitor case
- Tinned nickel leads, solderable and weldable

Approx. weight:
T1: 2.3 g, T2: 5.7 g
T3: 9.4 g, T4: 14.8 g

CAPACITANCE (µF)	VOLTAGE	CASE CODE	PART NUMBER	MAX. ESR AT		MAX. DCL AT		MAX. CAPACITANCE CHANGE AT			MAX. IMP. AT	AC RIPPLE 85 °C
				+ 25 °C 120 Hz (Ω)		+ 25 °C (μΑ)	+ 85 °C/ + 125 °C (μΑ)	- 55 °C (%)	+85°C (%)	+ 125 °C (%)	- 55 °C 120 Hz (Ω)	40 kHz mA RMS
			10	V _{DC} at + 8	35 °C; 7 V _C	c at + 12	25 °C					
680	10	T1	Preliminary value, contact marketing									
2000	10	T2	Preliminary value, contact marketing									
4700	10	T3	STE4700-10T3MI	0.35	< 0.200	16	100	- 80	10	20	3.50	4000
10 000	10	T4	STE10000-10T4MI	0.25	< 0.100	25	150	- 85	20	35	3.00	5000
			16 \	/ _{DC} at + 8	5 °C; 11 V	oc at + 12	25 °C					
430	16	T1	Preliminary value, contact marketing									
1200	16	T2	Preliminary value, contact marketing									
3300	16	T3	STE3300-16T3MI	0.35	< 0.200	16	100	- 80	10	15	3.50	4000
6000	16	T4	STE6000-16T4MI	0.30	< 0.150	25	150	- 80	15	20	3.00	4500
			25 \	/ _{DC} at + 8	5 °C; 15 V₁	oc at + 12	25 °C					
270	25	T1	Preliminary value, contact marketing									
1000	25	T2	Preliminary value, contact marketing									
2200	25	<i>T</i> 3	Preliminary value, contact marketing									
4000	25	T4	STE4000-25T4MI	0.35	< 0.150	25	125	- 80	15	20	5.00	4250
			30 \	/ _{DC} at + 8	5 °C; 20 V	oc at + 12	25 °C					
220	30	T1	Preliminary value, contact marketing									
820	30	T2	Preliminary value, contact marketing									
1800	30	<i>T</i> 3	Preliminary value, contact marketing									
3300	30	T4	STE3300-30T4MI	0.35	< 0.200	25	125	- 80	20	25	4.00	2750
			35 \	/ _{DC} at + 8	5 °C; 22 V₁	oc at + 12	25 °C					
180	35	T1	Preliminary value, contact marketing									
680	35	T2	Preliminary value, contact marketing									
1500	35	<i>T</i> 3	Preliminary value, contact marketing									
2800	35	T4	STE2800-35T4MI	0.35	< 0.200	25	125	- 80	20	30	4.50	4000



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STANDAR	D RATIN	GS											
CAPACITANCE (µF)	VOLTAGE	CASE CODE	PART NUMBER	MAX. ESR AT + 25 °C 120 Hz (Ω)	TYP. ESRAT + 25 °C 1 kHz (Ω)	MAX. DCL AT		MAX. CAPACITANCE CHANGE AT			MAX. IMP. AT	AC RIPPLE 85 °C	
						+ 25 °C (μΑ)	+ 85 °C/ + 125 °C (μΑ)	- 55 °C (%)	+85°C (%)	+ 125 °C (%)	- 55 °C 120 Hz (Ω)	40 kHz mA RMS	
			50 V	/ _{DC} at + 8	5 °C; 30 V	_{DC} at + 1	25 ℃						
110	50	T1	STE110-50T1MI	1.60	< 1.000	2	7.5	- 40	10	15	40.00	1500	
350	50	T2	Preliminary value, contact marketing										
900	50	Т3	STE900-50T3MI	0.90	< 0.300	15	125	- 75	20	20	10.00	2500	
1500	50	Т3	STE1500-50T3MI	1.00	< 0.300	25	130	- 85	25	30	8.00	2400	
1500	50	T4	STE1500-50T4MI	0.35	< 0.215	15	110	- 70	20	20	6.00	3500	
2200	50	T4	STE2200-50T4MI	0.60	< 0.400	25	125	- 80	25	30	4.50	3000	
			60 V	_{DC} at + 8	5 °C; 40 V	DC at + 1	25 °C						
68	60	T1	Preliminary value, contact marketing										
220	60	T2	Preliminary value, contact marketing										
560	60	Т3	STE560-60T3MI	0.90	< 0.300	20	120	- 70	12	15	10.00	2500	
1000	60	T4	STE1000-60T4MI	0.50	< 0.300	20	120	- 40	10	15	5.50	3500	
			75 V	/ _{DC} at + 8	5 °C; 50 V	DC at + 1	25 ℃						
56	<i>7</i> 5	T1	Preliminary value, contact marketing										
180	75	T2	STE180-75T2MI	1.50	< 0.500	5	25	- 35	15	20	30.00	2000	
470	75	T3	STE470-75T3MI	0.60	< 0.325	25	100	- 45	10	25	10.00	3000	
750	75	T4	STE750-75T4MI	0.50	< 0.400	20	120	- 35	10	15	6.50	3500	
			100	V _{DC} at + 8	35 °C; 65 \	/ _{DC} at + 1	25 °C						
27	100	T1	Preliminary value, contact marketing										
86	100	T2	Preliminary value, contact marketing										
220	100	Т3	STE220-100T3MI	1.40	< 0.200	5	25	- 55	10	15	18.00	2500	
400	100	T4	STE400-100T4MI	0.70	< 0.400	10	120	- 40	6	12	15.00	3000	
			125	V _{DC} at + 8	35 °C; 85 \	/ _{DC} at + 1	25 °C						
18	125	T1	Preliminary value, contact marketing										
56	125	T2	Preliminary value, contact marketing										
150	125	<i>T</i> 3	Preliminary value, contact marketing										
240	125	T4	STE240-125T4MI	0.80	< 0.600	15	150	- 35	6	12	20.00	2500	



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