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Vishay Sprague

SuperTan® Extended (10004) Capacitors, Wet Tantalum Capacitors with Hermetic Seal



FEATURES

- Ultra high capacitance
- · All tantalum, hermetically sealed case
- Utilizes proven Vishay SuperTan[®] technology
- High and stable capacitance
- · High reliability, rugged design
- Axial through-hole terminations: Standard tin/lead (Sn/Pb)

PERFORMANCE CHARACTERISTICS

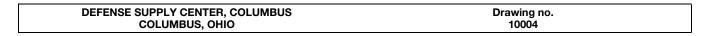
Operating Temperature: - 55 °C to + 85 °C (to + 125 °C with voltage derating)

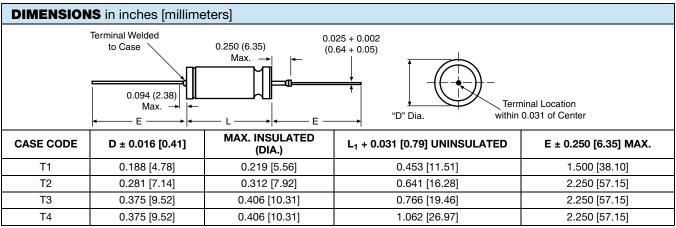
Capacitance Tolerance: At 120 Hz, + 25 °C. \pm 20 % standard. \pm 10 % available as special.

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.

ORDERING INFORMATION			
10004	-29	K	s
DSCC DRAWING NUMBER	DASH NUMBER	CAPACITANCE TOLERANCE L K = ± 10 % M = ± 20 %	S = Sleeved U = Unsleeved





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



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CAPACITANCE (µF)		2125	MAX.	TYP.	MAX.	DCL AT		CAPACI CHANGE		z	AC RIPPLE	
	VOLTAGE	CASE	ESR AT 120 Hz (Ω)	ESR AT 1 kHz (Ω)	+ 25 °C (μΑ)	+ 85 °C/ + 125 °C (μΑ)	-55°C +85°C (%) (%)		+ 125 °C (%)	- 55 °C (Ω)	85 °C 40 kHz mA RMS	PART NUMBER
			10 V _{DC}	AT + 85 °	C, SURG	iE = 11.5 V	_{DC} ; 7 V _D	oc AT + 1	25 °C			
4700	10	T3	0.35	< 0.200	16	100	- 80	10	20	3.50	4000	10004-01(1)(2
10 000	10	T4	0.25	< 0.100	25	150	- 85	20	35	3.00	5000	10004-02(1)(2
			16 V _{DC}	AT + 85 °	C, SURG	E = 18.4 V	_{DC} ; 11 V _I	DC AT + 1	125 °C			
3300	16	Т3	0.35	< 0.200	16	100	- 80	10	15	3.50	4000	10004-03(1)(2
6000	16	T4	0.30	< 0.150	25	150	- 80	15	20	3.00	4500	10004-04(1)(2
			25 V _{DC}	AT + 85 °	C, SURG	E = 28.8 V	_{DC} ; 15 V _I	DC AT + 1	125 °C			
4000	25	T4	0.35		25	125	- 80	15	20	5.00	4250	10004-05(1)(2
			30 V _{DC}	AT + 85 °	C, SURG	E = 34.5 V	_{DC} ; 20 V _I	DC AT + 1	125 °C			
3300	30	T4	0.35	< 0.200	25	125	- 80	20	25	4.00	2750	10004-06(1)(2
			35 V _{DC}	AT + 85 °	C, SURG	E = 40.3 V	_{DC} ; 22 V _I	DC AT + 1	125 °C			
2800	35	T4	0.35	< 0.200	25	125	- 80	20	30	4.50	4000	10004-07(1)(2
			50 V _{DC}	AT + 85 °	C, SURG	E = 57.5 V	_{DC} ; 30 V _I	DC AT + 1	125 °C			
1500	50	T4	0.35	< 0.215	15	110	- 70	20	20	6.00	3500	10004-08(1)(2
2200	50	T4	0.60	< 0.400	25	125	- 80	25	30	4.50	3000	10004-15(1)(2
			60 V _D	AT + 85 °	°C, SURC	SE = 69 V _D	_C ; 40 V _D	C AT + 1	25 ℃			
1000	60	T4	0.50	< 0.300	20	120	- 40	10	15	5.50	3500	10004-09(1)(2
			75 V _{DC}	AT + 85 °	C, SURG	E = 86.3 V	_{DC} ; 50 V _I	DC AT + 1	125 °C			
180	75	T2	1.50	< 0.500	5	25	- 35	15	20	30.00	2000	10004-10(1)(2
470	75	T3	0.60	< 0.325	25	100	- 45	10	25	10.00	3000	10004-11(1)(2
750	75	T4	0.50	< 0.400	20	120	- 35	10	15	6.50	3500	10004-12(1)(2
			100 V _D	AT + 85 °	°C, SURC	E = 115 V	_{DC} ; 65 V	DC AT +	125 °C			
400	100	T4	0.70	< 0.400	10	120	- 40	6	12	15.00	3000	10004-13(1)(2
			125 V _D	AT + 85 °	°C, SURC	E = 144 V	_{DC} ; 85 V	DC AT +	125 °C			
240	125	T4	0.80	< 0.600	15	150	- 35	6	12	20.00	2500	10004-14(1)(2

Note

Part number definitions:

(1) K = 10 % M = 20 %

(2) S = Sleeved or insulated U = Unsleeved

RIPPLE CURRENT MULTIPLIERS VS. FREQUENCY, TEMPERATURE AND APPLIES PEAK VOLTAGE															ìΕ										
FREQUI APPLIED CUR		120) Hz		800 Hz			1 kHz			10 kHz				40 kHz				100 kHz						
	NT STILL MP. IN °C	≤ 55	85	105	125	≤ 55	85	105	125	≤ 55	85	105	125	≤ 55	85	105	125	≤ 55	85	105	125	≤ 55	85	105	125
0/ - 5	100 %	0.60	0.39	-	-	0.71	0.43	-	-	0.72	0.46	-	-	0.88	0.55	-	-	1.0	0.63	-	-	1.1	0.69	-	-
% of 85 °C	90 %	0.60	0.46	-	-	0.71	0.55	-	-	0.72	0.55	-	-	0.88	0.67	-	-	1.0	0.77	-	-	1.1	0.85	-	-
rated	80 %	0.60	0.52	0.35	-	0.71	0.62	0.42	-	0.72	0.62	0.42	-	0.88	0.76	0.52	ı	1.0	0.87	0.59	-	1.1	0.96	0.65	-
peak voltage	70 %	0.60	0.58	0.44	-	0.71	0.69	0.52	-	0.72	0.70	0.52	-	0.88	0.85	0.64	-	1.0	0.97	0.73	-	1.1	1.07	0.80	-
voitage	66 2/3 %	0.60	0.60	0.46	0.27	0.71	0.71	0.55	0.32	0.72	0.72	0.55	0.32	0.88	0.88	0.68	0.40	1.0	1.0	0.77	0.45	1.1	1.1	0.85	0.50

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