

# TWA Series – DSCC 93026



## TWA Wet Electrolytic Tantalum Capacitor



The TWA series is an axial leaded wet electrolytic tantalum capacitor and represents a new level of high CV (capacitance/voltage) previously unavailable in this technology. TWA incorporates a novel, very high capacitance cathode system that allows for higher CV designs, well beyond values specified in the Mil-PRF-39006 drawing.

TWA products are listed in DSCC 93026, which includes new high capacitance/voltage ratings. This design includes a welded tantalum can and header assembly that provides a hermetic seal to withstand harsh shock and vibration requirements of 39006. Wet tantalums do not require the same derating as solid tantalums. AVX recommends derating components by only 20% in order to enhance reliability.

Customized capacitance and voltage packages are possible and welcomed. Contact the factory about design possibilities beyond those contained in this datasheet.

### OUTLINE DIMENSIONS



### CASE DIMENSIONS: millimeters (inches)

DSCC Case Size	AVX Case Size	L	D		E
			Without Insulating Sleeve	With Insulating Sleeve	
		+0.79 (0.031) -0.41 (0.016)	±0.41 (0.016)	Max	±6.35 (0.250)
T1	A	11.51 (0.453)	4.78 (0.188)	5.56 (0.219)	38.10 (1.500)
T2	B	16.28 (0.641)	7.14 (0.281)	7.92 (0.312)	57.15 (2.250)
T3	D	19.46 (0.766)	9.52 (0.375)	10.31 (0.406)	57.15 (2.250)
T4	E	26.97 (1.062)	9.52 (0.375)	10.31 (0.406)	57.15 (2.250)

### VOLTAGE RATINGS (Operating Temperature -55°C to 125°C)

Voltage (DC)								
Rated Voltage: (Ur)	85°C	25	30	50	60	75	100	125
Derated Voltage: (Uc)	125°C	15	20	30	40	50	65	85
Surge Voltage: (Us)	85°C	28.8	34.5	57.5	69	86.3	115	144



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### HOW TO ORDER

#### AVX PART NUMBER:



#### DSCC PART IDENTIFICATION NUMBER (PIN):



#### SPACE LEVEL OPTIONS TO SRC9000\*:



### RIPPLE CURRENT MULTIPLIERS vs. Frequency, temperature and applied voltage<sup>1/2/</sup>

Frequency of Applied Ripple Current	120Hz				800Hz				1kHz				
	≤55	85	105	125	≤55	85	105	125	≤55	85	105	125	
Ambient Still Air Temperature (°C)	≤55	85	105	125	≤55	85	105	125	≤55	85	105	125	
% of 85°C	100%	0.60	0.39	–	–	0.71	0.43	–	–	0.72	0.45	–	–
Rated Peak	90%	0.60	0.46	–	–	0.71	0.55	–	–	0.72	0.55	–	–
	80%	0.60	0.52	0.35	–	0.71	0.62	0.42	–	0.72	0.62	0.42	–
Voltage	70%	0.60	0.58	0.44	–	0.71	0.69	0.52	–	0.72	0.70	0.52	–
	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

Frequency of Applied Ripple Current	10kHz				40kHz				100kHz				
	≤55	85	105	125	≤55	85	105	125	≤55	85	105	125	
Ambient Still Air Temperature (°C)	≤55	85	105	125	≤55	85	105	125	≤55	85	105	125	
% of 85°C	100%	0.88	0.55	–	–	1.00	0.63	–	–	1.10	0.69	–	–
Rated Peak	90%	0.88	0.67	–	–	1.00	0.77	–	–	1.10	0.85	–	–
	80%	0.88	0.76	0.52	–	1.00	0.87	0.59	–	1.10	0.96	0.65	–
Voltage	70%	0.88	0.85	0.64	–	1.00	0.97	0.73	–	1.10	1.07	0.80	–
	66-2/3%	0.88	0.88	0.68	0.40	1.00	1.00	0.77	0.45	1.10	1.10	0.85	0.50

1/ At 125°C the rated voltage of the capacitors decreases to 66 2/3 of the 85°C rated voltage.

2/ The peak of the applied ac ripple voltage plus the applied dc voltage must not exceed the dc voltage rating of the capacitors.



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## TWA Wet Electrolytic Tantalum Capacitor

### RATINGS & PART NUMBER REFERENCE

AVX Part Number	DSCC Part Number	Cap (µF) 25°C at 120Hz	DC Rated Voltage (V) at 85°C	ESR max (ohms) at 120Hz	DC Leakage max (µA)		Impedance max (Ohms) -55°C at 120Hz	Maximum Capacitance Change (%)			AC Ripple (mA rms) 85°C at 40kHz	Case Size		
					+25°C	+85°C & 125°C		-55°C	+85°C	+125°C		AVX	DSCC	
<b>25 VDC at 85°C 15 VDC at 125°C</b>														
TWAA127*025□BSZ0000	93026- 29□	120	25	1.3	1	5	25	-42	8	12	1250	A	T1	
TWAB567*025□BSZ0000	93026- 30□	560	25	0.83	2	10	12	-65	10	15	2100	B	T2	
TWAD128*025□BSZ0000	93026- 31□	1200	25	0.65	5	20	7	-70	12	18	2600	D	T3	
TWAE188*025□BSZ0000	93026- 32□	1800	25	0.5	6	25	7	-75	12	20	3100	E	T4	
TWAE228*025□BSZ0000	93026- 64□	2200	25	0.5	10	80	10	-90	30	50	3200	E	T4	
<b>30 VDC at 85°C 20 VDC at 125°C</b>														
TWAA107*030□BSZ0000	93026- 33□	100	30	1.3	1	5	25	-38	8	12	1200	A	T1	
TWAB477*030□BSZ0000	93026- 34□	470	30	0.85	2	10	15	-65	10	18	1800	B	T2	
TWAD108*030□BSZ0000	93026- 35□	1000	30	0.7	7	25	7	-70	10	18	2500	D	T3	
TWAE158*030□BSZ0000	93026- 36□	1500	30	0.6	12	35	6	-72	10	20	3000	E	T4	
<b>50 VDC at 85°C 30 VDC at 125°C</b>														
TWAA686*050□BSZ0000	93026- 37□	68	50	1.5	1	5	35	-25	8	15	1050	A	T1	
TWAB227*050□BSZ0000	93026- 38□	220	50	0.9	2	10	17.5	-50	8	15	1800	B	T2	
TWAD477*050□BSZ0000	93026- 39□	470	50	0.75	3	25	10	-50	8	15	2100	D	T3	
TWAE687*050□BSZ0000	93026- 40□	680	50	0.7	5	40	8	-58	10	20	2750	E	T4	
<b>60 VDC at 85°C 40 VDC at 125°C</b>														
TWAA476*060□BSZ0000	93026- 41□	47	60	2	1	5	44	-25	8	12	1050	A	T1	
TWAB157*060□BSZ0000	93026- 42□	150	60	1.1	2	10	20	-40	8	15	1650	B	T2	
TWAD397*060□BSZ0000	93026- 43□	390	60	0.9	3	25	15	-60	8	15	2100	D	T3	
TWAE567*060□BSZ0000	93026- 44□	560	60	0.8	5	40	10	-58	8	15	2750	E	T4	
TWAE108*060□BSZ0000	93026- 65□	1000	60	1	12	90	20	-90	30	50	3200	E	T4	
<b>75 VDC at 85°C 50 VDC at 125°C</b>														
TWAA336*075□BSZ0000	93026- 45□	33	75	2.5	1	5	66	-25	5	9	1050	A	T1	
TWAB117*075□BSZ0000	93026- 46□	110	75	1.3	2	10	24	-35	6	10	1650	B	T2	
TWAD337*075□BSZ0000	93026- 47□	330	75	1	3	30	12	-45	6	10	2100	D	T3	
TWAE477*075□BSZ0000	93026- 48□	470	75	0.9	5	50	12	-55	6	10	2750	E	T4	
<b>100 VDC at 85°C 65 VDC at 125°C</b>														
TWAA156*100□BSZ0000	93026- 49□	15	100	3.5	1	5	125	-18	3	10	1050	A	T1	
TWAB686*100□BSZ0000	93026- 50□	68	100	2.1	2	10	37	-30	4	12	1650	B	T2	
TWAD157*100□BSZ0000	93026- 51□	150	100	1.6	3	25	22	-35	6	12	2100	D	T3	
TWAE227*100□BSZ0000	93026- 52□	220	100	1.2	5	50	15	-40	6	12	2750	E	T4	
<b>125 VDC at 85°C 85 VDC at 125°C</b>														
TWAA106*125□BSZ0000	93026- 53□	10	125	5.5	1	5	175	-15	3	10	1050	A	T1	
TWAB476*125□BSZ0000	93026- 54□	47	125	2.3	2	10	47	-25	5	12	1650	B	T2	
TWAD107*125□BSZ0000	93026- 55□	100	125	1.8	3	25	35	-35	5	12	2100	D	T3	
TWAE157*125□BSZ0000	93026- 56□	150	125	1.6	5	50	20	-35	6	12	2750	E	T4	

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5RMS with DC bias of 2.2V. DCL is measured at rated voltage after 5 minutes.

NOTE: AVX reserves the rights to supply higher voltage rating in the same case size, to the same reliability standards.



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