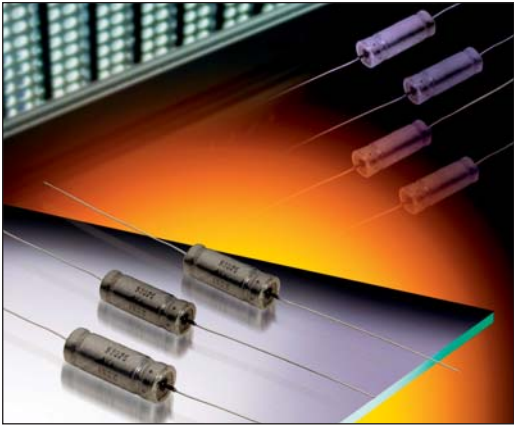


# TWA Series



## TWA Wet Electrolytic Tantalum Capacitor



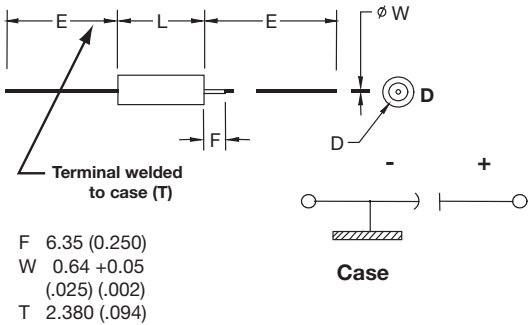
The TWA series is an axial leaded wet electrolytic tantalum capacitor and represents a new level of high CV (capacitance / voltage) previously unavailable in this technology. TWA incorporates a novel, very high capacitance cathode system that allows for higher CV designs, well beyond values specified in the Mil-PRF-39006 drawing. TWA products are listed in DSCC 93026 Rev. P, which includes new high

capacitance / voltage ratings.

This design includes a welded tantalum can and header assembly that provides a hermetic seal to withstand the harsh shock and vibration requirements of 39006.

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 Max	
		+0.79 (0.031) -0.41 (0.016)	±0.41 (0.016)		±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)

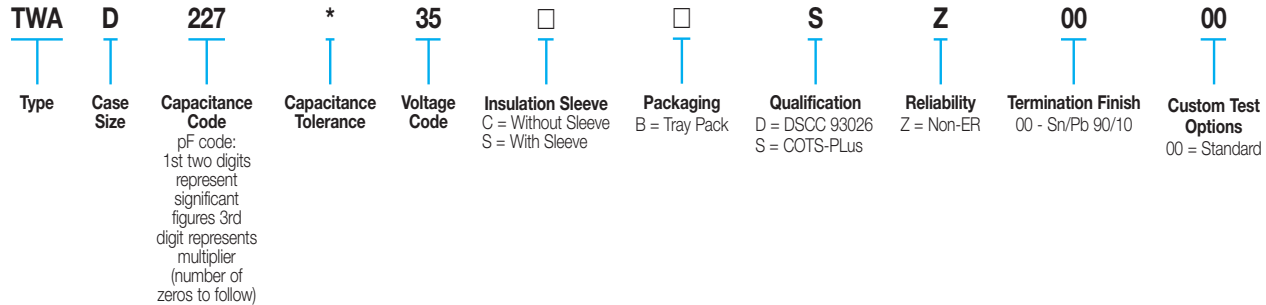
Voltage (DC)								
Rated Voltage: (Ur)	85°C	25	30	50	60	75	100	125
Derated Voltage: (Uc)	125°C	15	20	30	40	50	65	85
Surge Voltage: (Us)	85°C	28.8	34.5	57.5	69	86.3	115	144



## TWA Wet Electrolytic Tantalum Capacitor

### HOW TO ORDER

#### AVX PART NUMBER:



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



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

Frequency of Applied Ripple Current		120Hz				800Hz				1kHz			
Ambient Still Air Temperature (°C)		≤55	85	105	125	≤55	85	105	125	≤55	85	105	125
% of	100%	0.60	0.39	–	–	0.71	0.43	–	–	0.72	0.45	–	–
85°C	90%	0.60	0.46	–	–	0.71	0.55	–	–	0.72	0.55	–	–
Rated	80%	0.60	0.52	0.35	–	0.71	0.62	0.42	–	0.72	0.62	0.42	–
Peak	70%	0.60	0.58	0.44	–	0.71	0.69	0.52	–	0.72	0.70	0.52	–
Voltage	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			
Ambient Still Air Temperature (°C)		≤55	85	105	125	≤55	85	105	125	≤55	85	105	125
% of	100%	0.88	0.55	–	–	1.00	0.63	–	–	1.10	0.69	–	–
85°C	90%	0.88	0.67	–	–	1.00	0.77	–	–	1.10	0.85	–	–
Rated	80%	0.88	0.76	0.52	–	1.00	0.87	0.59	–	1.10	0.96	0.65	–
Peak	70%	0.88	0.85	0.64	–	1.00	0.97	0.73	–	1.10	1.07	0.80	–
Voltage	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.

# TWA Series



## 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*025C□#@00++	93026- 29□	120	25	1.3	1	5	25	-42	8	12	1250	A	T1
TWAB567*025C□#@00++	93026- 30□	560	25	0.83	2	10	12	-65	10	15	2100	B	T2
TWAD128*025C□#@00++	93026- 31□	1200	25	0.65	5	20	7	-70	12	18	2600	D	T3
TWAE188*025C□#@00++	93026- 32□	1800	25	0.5	6	25	7	-75	12	20	3100	E	T4
TWAE228*025C□#@00++	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*030C□#@00++	93026- 33□	100	30	1.3	1	5	25	-38	8	12	1200	A	T1
TWAB477*030C□#@00++	93026- 34□	470	30	0.85	2	10	15	-65	10	18	1800	B	T2
TWAD108*030C□#@00++	93026- 35□	1000	30	0.7	7	25	7	-70	10	18	2500	D	T3
TWAE158*030C□#@00++	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*050C□#@00++	93026- 37□	68	50	1.5	1	5	35	-25	8	15	1050	A	T1
TWAB227*050C□#@00++	93026- 38□	220	50	0.9	2	10	17.5	-50	8	15	1800	B	T2
TWAD477*050C□#@00++	93026- 39□	470	50	0.75	3	25	10	-50	8	15	2100	D	T3
TWAE687*050C□#@00++	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*060C□#@00++	93026- 41□	47	60	2	1	5	44	-25	8	12	1050	A	T1
TWAB157*060C□#@00++	93026- 42□	150	60	1.1	2	10	20	-40	8	15	1650	B	T2
TWAD397*060C□#@00++	93026- 43□	390	60	0.9	3	25	15	-60	8	15	2100	D	T3
TWAE567*060C□#@00++	93026- 44□	560	60	0.8	5	40	10	-58	8	15	2750	E	T4
TWAE108*060C□#@00++	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*075C□#@00++	93026- 45□	33	75	2.5	1	5	66	-25	5	9	1050	A	T1
TWAB117*075C□#@00++	93026- 46□	110	75	1.3	2	10	24	-35	6	10	1650	B	T2
TWAD337*075C□#@00++	93026- 47□	330	75	1	3	30	12	-45	6	10	2100	D	T3
TWAE477*075C□#@00++	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*100C□#@00++	93026- 49□	15	100	3.5	1	5	125	-18	3	10	1050	A	T1
TWAB686*100C□#@00++	93026- 50□	68	100	2.1	2	10	37	-30	4	12	1650	B	T2
TWAD157*100C□#@00++	93026- 51□	150	100	1.6	3	25	22	-35	6	12	2100	D	T3
TWAE227*100C□#@00++	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*125C□#@00++	93026- 53□	10	125	5.5	1	5	175	-15	3	10	1050	A	T1
TWAB476*125C□#@00++	93026- 54□	47	125	2.3	2	10	47	-25	5	12	1650	B	T2
TWAD107*125C□#@00++	93026- 55□	100	125	1.8	3	25	35	-35	5	12	2100	D	T3
TWAE157*125C□#@00++	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.