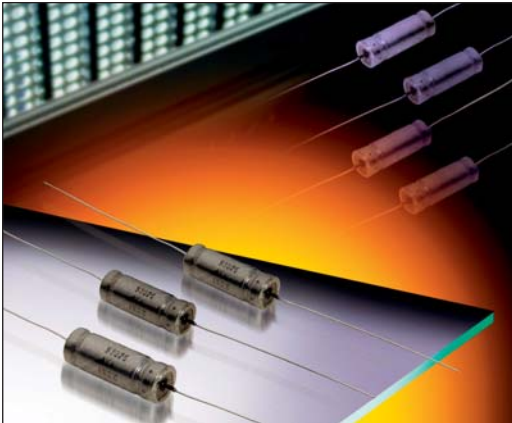


TWA Series



TWA Wet Electrolytic Tantalum Capacitor



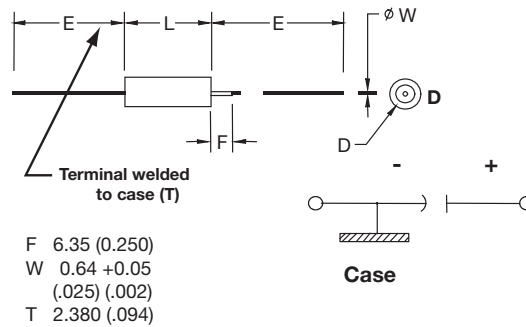
The TWA series is an axial leaded wet electrolytic tantalum capacitor and represents a new level of high CV (capacitance / voltage) previously unavailable in this technology. TWA incorporates a novel, very high capacitance cathode system that allows for higher CV designs, well beyond values specified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

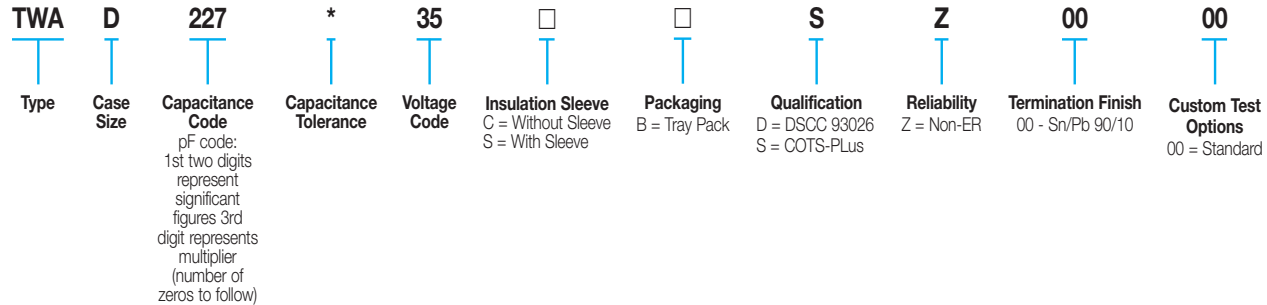
| Voltage (DC) | | | | | | | | |
|-----------------------|-------|------|------|------|----|------|-----|-----|
| Rated Voltage: (Ur) | 85°C | 25 | 30 | 50 | 60 | 75 | 100 | 125 |
| Derated Voltage: (Uc) | 125°C | 15 | 20 | 30 | 40 | 50 | 65 | 85 |
| Surge Voltage: (Us) | 85°C | 28.8 | 34.5 | 57.5 |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



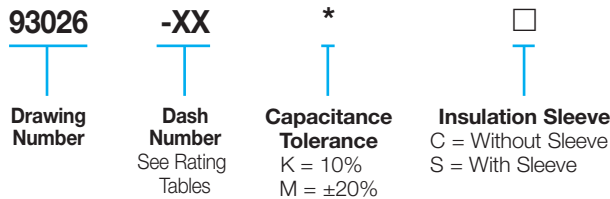
TWA Wet Electrolytic Tantalum Capacitor

HOW TO ORDER

AVX PART NUMBER:



DSCC PART IDENTIFICATION NUMBER (PIN):



RIPPLE CURRENT MULTIPLIERS vs. Frequency, temperature and applied voltage^{1/2/}

| 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 |
| 25 VDC at 85°C 15 VDC at 125°C | | | | | | | | | | | | | |
| 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 |
| 30 VDC at 85°C 20 VDC at 125°C | | | | | | | | | | | | | |
| 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 |
| 50 VDC at 85°C 30 VDC at 125°C | | | | | | | | | | | | | |
| 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 |
| 60 VDC at 85°C 40 VDC at 125°C | | | | | | | | | | | | | |
| 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 |
| 75 VDC at 85°C 50 VDC at 125°C | | | | | | | | | | | | | |
| 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 |
| 100 VDC at 85°C 65 VDC at 125°C | | | | | | | | | | | | | |
| 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 |
| 125 VDC at 85°C 85 VDC at 125°C | | | | | | | | | | | | | |
| 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.