

# TWA Series



## COTS-Plus Wet Electrolytic Tantalum Capacitor

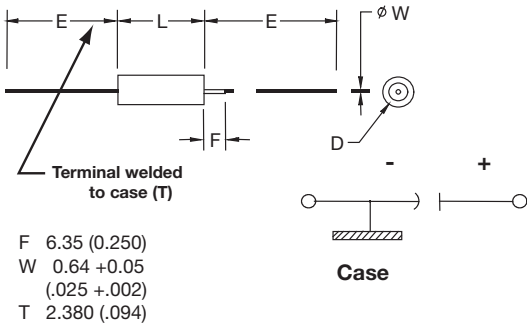


The TWA series is an axial leaded wet electrolytic tantalum capacitor with a unique cathode system that promotes very high CV (Capacitance/Voltage) per cc in traditional MIL-PRF-39006 case sizes.

The series also utilizes a welded tantalum can and header assembly to provide a hermetic seal and subsequent long operating lifetime.

The construction is similar to DSCC 93026 with capability of meeting harsh shock and vibration conditions.

### OUTLINE DIMENSIONS



### CASE DIMENSIONS: millimeters (inches)

| DSCC Case Size | AVX Case Size | L<br>+0.79 (0.031)<br>-0.41 (0.016) | D<br>Without Insulating Sleeve<br>±0.41 (0.016) | D<br>With Insulating Sleeve<br>Max | E<br>±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: (V <sub>R</sub> )   | 85°C  | 15   | 25   | 30   | 50   | 60 | 75   | 100 | 125 |
| Derated Voltage: (V <sub>C</sub> ) | 125°C | 10   | 15   | 20   | 30   | 40 | 50   | 65  | 85  |
| Surge Voltage: (V <sub>S</sub> )   | 85°C  | 17.3 | 28.8 | 34.5 | 57.5 | 69 | 86.3 | 115 | 144 |

# TWA Series



## COTS-Plus Wet Electrolytic Tantalum Capacitor

### HOW TO ORDER

#### AVX PART NUMBER:

| TWA  | E         | 407                                                                                                                                      | *                                             | 100          | □                                                          | B                          | S                                                               | Z                         | 0                              | ^                                                      | 00                                                             |
|------|-----------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--------------|------------------------------------------------------------|----------------------------|-----------------------------------------------------------------|---------------------------|--------------------------------|--------------------------------------------------------|----------------------------------------------------------------|
| Type | Case Size | Capacitance Code<br>pF code:<br>1st two digits represent significant figures 3rd digit represents multiplier (number of zeros to follow) | Capacitance Tolerance<br>K = ±10%<br>M = ±20% | Voltage Code | Insulation Sleeve<br>C = Without Sleeve<br>S = With Sleeve | Packaging<br>B = Tray Pack | Qualification<br>E = Extended range<br>S = COTS+<br>L = Group A | Reliability<br>Z = Non-ER | Qualification Level<br>0 = N/A | Termination Finish<br>0 = Sn/Pb 60/40<br>7 = Matte tin | Custom Test Options<br>00 = Standard<br>01 = Random vibration* |



LEAD-FREE  
LEAD-FREE COMPATIBLE  
COMPONENT



RoHS  
COMPLIANT

For RoHS compliant products,  
please select correct termination style.

\* Please contact the factory for additional details and availability.

### 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.

## COTS-Plus Wet Electrolytic Tantalum Capacitor

### CAPACITANCE AND RATED VOLTAGE, $V_R$ (VOLTAGE CODE) RANGE (LETTER DENOTES CASE SIZE)

| Capacitance |      | Rated Voltage DC ( $V_R$ ) to 85°C |      |      |                  |                  |                  |                  |      |
|-------------|------|------------------------------------|------|------|------------------|------------------|------------------|------------------|------|
| $\mu F$     | Code | 15V                                | 25V  | 30V  | 50V              | 60V              | 75V              | 100V             | 125V |
| 10          | 106  |                                    |      |      | A*               |                  |                  | A                | A    |
| 15          | 156  |                                    |      |      |                  |                  |                  | A                |      |
| 22          | 226  |                                    | A*   |      |                  | A*               | A*               | B                |      |
| 27          | 276  |                                    |      |      |                  |                  |                  |                  | B    |
| 33          | 336  |                                    |      |      |                  |                  | A                |                  |      |
| 47          | 476  |                                    |      |      | A*,B             | A                |                  |                  | B    |
| 68          | 686  |                                    | A    |      | A                |                  | A <sup>(M)</sup> | B                |      |
| 82          | 826  |                                    |      |      |                  |                  |                  |                  | E    |
| 100         | 107  |                                    |      | A    | A <sup>(M)</sup> | B                | B                |                  | D    |
| 110         | 117  |                                    |      |      |                  |                  | B                |                  |      |
| 120         | 127  |                                    | A    |      | A*,B             |                  |                  |                  | D    |
| 150         | 157  |                                    |      |      | B                | B                | D*               | D                | E    |
| 220         | 227  |                                    |      | B    | B                | D*               | D*,E             | D,E              | E    |
| 270         | 277  |                                    | B    |      |                  |                  |                  |                  |      |
| 330         | 337  |                                    | B    | D*   | D*,E             | E*               | D,E              | E                |      |
| 390         | 397  | D                                  |      |      |                  | D                |                  |                  |      |
| 400         | 407  |                                    |      |      |                  |                  |                  | E                |      |
| 470         | 477  |                                    |      | B,D* | D,E              |                  | E                | E <sup>(M)</sup> |      |
| 560         | 567  |                                    | B,D* | D*   |                  | E                |                  | E                |      |
| 660         | 667  |                                    |      |      |                  |                  | E                |                  |      |
| 680         | 687  |                                    | D*,E | D,E  | E                | E                | E                |                  |      |
| 750         | 757  |                                    | D,E  | D,E  | E                | E                | E                | E                |      |
| 1000        | 108  |                                    | D,E  | D,E  | D,E              | E                | E                |                  |      |
| 1200        | 128  |                                    | D    |      | E                |                  |                  |                  |      |
| 1500        | 158  |                                    | E    | E    | E                |                  |                  |                  |      |
| 1800        | 188  |                                    | E    |      |                  |                  |                  |                  |      |
| 2200        | 228  |                                    | E    |      |                  | E <sup>(M)</sup> |                  |                  |      |
| 3000        | 308  |                                    |      |      | E <sup>(M)</sup> |                  |                  |                  |      |
| 4700        | 478  |                                    | E    |      |                  |                  |                  |                  |      |
| 5600        | 568  |                                    | E*   |      |                  |                  |                  |                  |      |

Available Ratings <sup>(M tolerance only)</sup>

Engineering samples - please contact manufacturer

\*Codes under development

## COTS-Plus Wet Electrolytic Tantalum Capacitor

## RATINGS &amp; PART NUMBER REFERENCE

| AVX Part Number                | Cap (µF)<br>25°C<br>at 120Hz | DC Rated<br>Voltage (V)<br>at 85°C | ESR Max<br>(Ohms)<br>at 120Hz | DC Leakage max (µA) |                 | Impedance<br>max (Ohms)<br>-55°C at 120Hz | Maximum Capacitance Change<br>(%) |       |        | AC Ripple<br>(mA rms)<br>85°C at 40kHz | Case Size |      |
|--------------------------------|------------------------------|------------------------------------|-------------------------------|---------------------|-----------------|-------------------------------------------|-----------------------------------|-------|--------|----------------------------------------|-----------|------|
|                                |                              |                                    |                               | +25°C               | +85 &<br>+125°C |                                           | -55°C                             | +85°C | +125°C |                                        | AVX       | DSCC |
| 15 VDC at 85°C 10 VDC at 125°C |                              |                                    |                               |                     |                 |                                           |                                   |       |        |                                        |           |      |
| TWAD397*015□BSZ0^00            | 390                          | 15                                 | 1.7                           | 7                   | 28              | 48                                        | -70                               | 25    | 25     | 1396                                   | D         | T3   |
| 25 VDC at 85°C 15 VDC at 125°C |                              |                                    |                               |                     |                 |                                           |                                   |       |        |                                        |           |      |
| TWAA686*025□BEZ0^00            | 68                           | 25                                 | 2.5                           | 0.6                 | 3               | 45                                        | -40                               | 12    | 15     | 850                                    | A         | T1   |
| TWAA127*025□BSZ0000            | 120                          | 25                                 | 1.3                           | 1                   | 5               | 25                                        | -42                               | 8     | 12     | 1250                                   | A         | T1   |
| TWAA127*025□BEZ0^00*           | 120                          | 25                                 | 2.3                           | 2                   | 10              | 35                                        | -42                               | 20    | 25     | 1250                                   | A         | T1   |
| TWAB277*025□BEZ0^00            | 270                          | 25                                 | 0.9                           | 4                   | 20              | 17.5                                      | -50                               | 18    | 28     | 1800                                   | B         | T2   |
| TWAB337*025□BEZ0^00            | 330                          | 25                                 | 1.3                           | 2                   | 20              | 25                                        | -60                               | 10    | 15     | 1550                                   | B         | T2   |
| TWAB567*025□BSZ0^00            | 560                          | 25                                 | 0.83                          | 2                   | 10              | 12                                        | -65                               | 10    | 15     | 2100                                   | B         | T2   |
| TWAE687*025□BEZ0^00            | 680                          | 25                                 | 0.75                          | 3                   | 12              | 12                                        | -50                               | 8     | 15     | 2100                                   | E         | T4   |
| TWAD757*025□BEZ0^00            | 750                          | 25                                 | 1                             | 3                   | 25              | 15                                        | -50                               | 8     | 15     | 2000                                   | D         | T3   |
| TWAE757*025□BEZ0^00            | 750                          | 25                                 | 0.75                          | 3.5                 | 16              | 9                                         | -55                               | 10    | 18     | 2200                                   | E         | T4   |
| TWAD108*025□BEZ0^00            | 1000                         | 25                                 | 1                             | 4                   | 30              | 15                                        | -50                               | 8     | 15     | 2300                                   | D         | T3   |
| TWAE108*025□BEZ0^00            | 1000                         | 25                                 | 0.7                           | 4                   | 20              | 9                                         | -55                               | 10    | 18     | 2400                                   | E         | T4   |
| TWAD128*025□BSZ0^00            | 1200                         | 25                                 | 0.65                          | 5                   | 20              | 7                                         | -70                               | 12    | 18     | 2600                                   | D         | T3   |
| TWAD128*025□BEZ0^00*           | 1200                         | 25                                 | 0.65                          | 5                   | 20              | 7                                         | -70                               | 12    | 18     | 2600                                   | D         | T3   |
| TWAE158*025□BEZ0^00            | 1500                         | 25                                 | 0.5                           | 6                   | 24              | 7                                         | -65                               | 15    | 20     | 2850                                   | E         | T4   |
| TWAE188*025□BSZ0^00            | 1800                         | 25                                 | 0.5                           | 6                   | 25              | 7                                         | -75                               | 12    | 20     | 3100                                   | E         | T4   |
| TWAE228*025□BSZ0^00            | 2200                         | 25                                 | 0.5                           | 10                  | 80              | 10                                        | -90                               | 30    | 50     | 3200                                   | E         | T4   |
| TWAE478*025□BSZ0^00            | 4700                         | 25                                 | 0.5                           | 30                  | 180             | 5                                         | -90                               | 60    | 80     | 4250                                   | E         | T4   |
| TWAE478*025□BEZ0^00*           | 4700                         | 25                                 | 0.5                           | 30                  | 180             | 5                                         | -90                               | 60    | 80     | 4250                                   | E         | T4   |
| 30 VDC at 85°C 20 VDC at 125°C |                              |                                    |                               |                     |                 |                                           |                                   |       |        |                                        |           |      |
| TWAA107*030□BSZ0000            | 100                          | 30                                 | 1.3                           | 1                   | 5               | 25                                        | -38                               | 8     | 12     | 1200                                   | A         | T1   |
| TWAA107*030□BEZ0^00*           | 100                          | 30                                 | 2.3                           | 2                   | 10              | 35                                        | -38                               | 20    | 25     | 1200                                   | A         | T1   |
| TWAB227*030□BEZ0^00            | 220                          | 30                                 | 2                             | 1.9                 | 10              | 40                                        | -40                               | 18    | 28     | 1200                                   | B         | T2   |
| TWAB477*030□BSZ0^00            | 470                          | 30                                 | 0.85                          | 2                   | 10              | 15                                        | -65                               | 10    | 18     | 1800                                   | B         | T2   |
| TWAD687*030□BEZ0^00            | 680                          | 30                                 | 1                             | 3.3                 | 25              | 15                                        | -50                               | 8     | 15     | 1900                                   | D         | T3   |
| TWAE687*030□BEZ0^00            | 680                          | 30                                 | 0.8                           | 4.5                 | 18              | 10                                        | -60                               | 8     | 15     | 2100                                   | E         | T4   |
| TWAD757*030□BEZ0^00            | 750                          | 30                                 | 1                             | 3.6                 | 30              | 15                                        | -50                               | 8     | 15     | 2000                                   | D         | T3   |
| TWAE757*030□BEZ0^00            | 750                          | 30                                 | 0.8                           | 5                   | 20              | 10                                        | -65                               | 10    | 18     | 2200                                   | E         | T4   |
| TWAD108*030□BSZ0^00            | 1000                         | 30                                 | 0.7                           | 7                   | 25              | 7                                         | -70                               | 10    | 18     | 2500                                   | D         | T3   |
| TWAD108*030□BEZ0^00*           | 1000                         | 30                                 | 0.7                           | 7                   | 25              | 7                                         | -70                               | 10    | 18     | 2500                                   | D         | T3   |
| TWAE108*030□BEZ0^00            | 1000                         | 30                                 | 0.7                           | 5                   | 20              | 7                                         | -70                               | 10    | 18     | 2500                                   | E         | T4   |
| TWAE158*030□BSZ0^00            | 1500                         | 30                                 | 0.6                           | 12                  | 35              | 6                                         | -72                               | 10    | 20     | 3000                                   | E         | T4   |
| 50 VDC at 85°C 30 VDC at 125°C |                              |                                    |                               |                     |                 |                                           |                                   |       |        |                                        |           |      |
| TWAB476*050□BSZ0^00            | 47                           | 50                                 | 3                             | 0.8                 | 8               | 70                                        | -28                               | 13    | 15     | 1155                                   | B         | T2   |
| TWAA686*050□BSZ0000            | 68                           | 50                                 | 1.5                           | 1                   | 5               | 35                                        | -25                               | 8     | 15     | 1050                                   | A         | T1   |
| TWAA686*050□BEZ0^00*           | 68                           | 50                                 | 2.5                           | 2                   | 10              | 45                                        | -25                               | 20    | 25     | 1050                                   | A         | T1   |
| TWAA107M050□BSZ0^00            | 100                          | 50                                 | 5                             | 2                   | 15              | 70                                        | -45                               | 50    | 95     | 1500                                   | A         | T1   |
| TWAB127*050□BEZ0^00            | 120                          | 50                                 | 2                             | 2                   | 10              | 40                                        | -45                               | 8     | 15     | 1200                                   | B         | T2   |
| TWAB157*050□BEZ0^00            | 150                          | 50                                 | 2                             | 2                   | 10              | 25                                        | -50                               | 8     | 15     | 1400                                   | B         | T2   |
| TWAB227*050□BSZ0000            | 220                          | 50                                 | 0.9                           | 2                   | 10              | 17.5                                      | -50                               | 8     | 15     | 1800                                   | B         | T2   |
| TWAB227*050□BEZ0^00*           | 220                          | 50                                 | 0.9                           | 4                   | 20              | 17.5                                      | -50                               | 18    | 28     | 1800                                   | B         | T2   |
| TWAE337*050□BSZ0^00            | 330                          | 50                                 | 0.8                           | 2.5                 | 25              | 15                                        | -50                               | 8     | 15     | 1900                                   | E         | T4   |
| TWAE337*050□BEZ0^00*           | 330                          | 50                                 | 0.8                           | 2.5                 | 25              | 15                                        | -50                               | 8     | 15     | 1900                                   | E         | T4   |
| TWAD477*050□BSZ0^00            | 470                          | 50                                 | 0.75                          | 3                   | 25              | 10                                        | -50                               | 8     | 15     | 2100                                   | D         | T3   |
| TWAD477*050□BEZ0^00*           | 470                          | 50                                 | 1                             | 3                   | 25              | 11                                        | -50                               | 8     | 15     | 2100                                   | D         | T3   |
| TWAE477*050□BSZ0^00            | 470                          | 50                                 | 0.75                          | 3                   | 30              | 10                                        | -50                               | 8     | 15     | 2200                                   | E         | T4   |
| TWAE477*050□BEZ0^00*           | 470                          | 50                                 | 0.75                          | 3                   | 30              | 10                                        | -50                               | 8     | 15     | 2200                                   | E         | T4   |
| TWAE687*050□BSZ0^00            | 680                          | 50                                 | 0.7                           | 5                   | 40              | 8                                         | -58                               | 10    | 20     | 2750                                   | E         | T4   |
| TWAE687*050□BEZ0^00*           | 680                          | 50                                 | 0.7                           | 5                   | 40              | 8                                         | -58                               | 10    | 20     | 2750                                   | E         | T4   |
| TWAE757*050□BEZ0^00            | 750                          | 50                                 | 0.6                           | 12                  | 60              | 8                                         | -50                               | 15    | 20     | 2800                                   | E         | T4   |
| TWAD108*050□BEZ0^00            | 1000                         | 50                                 | 1.5                           | 20                  | 125             | 12                                        | -90                               | 100   | 140    | 2500                                   | D         | T3   |
| TWAE108*050□BSZ0^00            | 1000                         | 50                                 | 1.0                           | 12                  | 90              | 20                                        | -90                               | 30    | 50     | 3200                                   | E         | T4   |
| TWAE108*050□BEZ0^00*           | 1000                         | 50                                 | 0.7                           | 11                  | 110             | 20                                        | -70                               | 30    | 40     | 3200                                   | E         | T4   |
| TWAE128*050□BSZ0^00            | 1200                         | 50                                 | 1.0                           | 12                  | 90              | 20                                        | -90                               | 30    | 50     | 3200                                   | E         | T4   |
| TWAE158*050□BSZ0^00            | 1500                         | 50                                 | 1                             | 35                  | 130             | 6                                         | -75                               | 45    | 55     | 3500                                   | E         | T4   |
| TWAE308M050□BSZ0^00            | 3000                         | 50                                 | 0.3                           | 30                  | 150             | 3.5                                       | -80                               | 60    | 85     | 3100                                   | E         | T4   |
| TWAE308M050□BEZ0^00*           | 3000                         | 50                                 | 0.3                           | 30                  | 150             | 3.5                                       | -80                               | 60    | 85     | 3100                                   | E         | T4   |
| 60 VDC at 85°C 40 VDC at 125°C |                              |                                    |                               |                     |                 |                                           |                                   |       |        |                                        |           |      |
| TWAA476*060□BSZ0000            | 47                           | 60                                 | 2                             | 1                   | 5               | 44                                        | -25                               | 8     | 12     | 1050                                   | A         | T1   |
| TWAA476*060□BEZ0^00*           | 47                           | 60                                 | 2                             | 2                   | 10              | 55                                        | -25                               | 15    | 25     | 1050                                   | A         | T1   |
| TWAB107*060□BEZ0^00            | 100                          | 60                                 | 2.5                           | 1.7                 | 10              | 40                                        | -40                               | 8     | 15     | 1100                                   | B         | T2   |
| TWAB157*060□BSZ0000            | 150                          | 60                                 | 1.1                           | 2                   | 10              | 20                                        | -40                               | 8     | 15     | 1650                                   | B         | T2   |
| TWAB157*060□BEZ0^00*           | 150                          | 60                                 | 1.5                           | 2                   | 10              | 30                                        | -35                               | 12    | 20     | 1650                                   | B         | T2   |
| TWAD397*060□BSZ0^00            | 390                          | 60                                 | 0.9                           | 3                   | 25              | 15                                        | -60                               | 8     | 15     | 2100                                   | D         | T3   |

### RATINGS & PART NUMBER REFERENCE

| AVX Part Number                 | Cap (µF)<br>25°C<br>at 120Hz | DC Rated<br>Voltage (V)<br>at 85°C | ESR Max<br>(Ohms)<br>at 120Hz | DC Leakage max (µA) |                 | Impedance<br>max (Ohms)<br>-55°C at 120Hz | Maximum Capacitance Change<br>(%) |       |        | AC Ripple<br>(mA rms)<br>85°C at 40kHz | Case Size |      |
|---------------------------------|------------------------------|------------------------------------|-------------------------------|---------------------|-----------------|-------------------------------------------|-----------------------------------|-------|--------|----------------------------------------|-----------|------|
|                                 |                              |                                    |                               | +25°C               | +85 &<br>+125°C |                                           | -55°C                             | +85°C | +125°C |                                        | AVX       | DSCC |
| TWAD397*060□BEZ0^00*            | 390                          | 60                                 | 0.9                           | 3                   | 25              | 15                                        | -60                               | 8     | 15     | 2100                                   | D         | T3   |
| TWAE567*060□BSZ0^00             | 560                          | 60                                 | 0.8                           | 5                   | 40              | 10                                        | -58                               | 8     | 15     | 2750                                   | E         | T4   |
| TWAE567*060□BEZ0^00*            | 560                          | 60                                 | 0.8                           | 5                   | 40              | 10                                        | -58                               | 8     | 15     | 2750                                   | E         | T4   |
| TWAE687*060□BEZ0^00             | 680                          | 60                                 | 0.6                           | 13                  | 65              | 8                                         | -50                               | 15    | 20     | 2800                                   | E         | T4   |
| TWAE757*060□BEZ0^00             | 750                          | 60                                 | 0.6                           | 15                  | 75              | 8                                         | -50                               | 15    | 20     | 2800                                   | E         | T4   |
| TWAE108*060□BSZ0^00             | 1000                         | 60                                 | 1                             | 12                  | 90              | 20                                        | -90                               | 30    | 50     | 3200                                   | E         | T4   |
| TWAE108*060□BEZ0^00*            | 1000                         | 60                                 | 0.5                           | 20                  | 60              | 4.5                                       | -70                               | 30    | 60     | 3200                                   | E         | T4   |
| TWAE228M060□BEZ0^00             | 2200                         | 60                                 | 0.5                           | 40                  | 120             | 3.0                                       | -80                               | 60    | 80     | 3000                                   | E         | T4   |
| 75 VDC at 85°C 50 VDC at 125°C  |                              |                                    |                               |                     |                 |                                           |                                   |       |        |                                        |           |      |
| TWAA336*075□BSZ0000             | 33                           | 75                                 | 2.5                           | 1                   | 5               | 66                                        | -25                               | 5     | 9      | 1050                                   | A         | T1   |
| TWAA336*075□BEZ0^00*            | 33                           | 75                                 | 2.5                           | 2                   | 10              | 70                                        | -25                               | 15    | 25     | 1050                                   | A         | T1   |
| TWAA686M075□BSZ0^00             | 68                           | 75                                 | 5                             | 2                   | 15              | 70                                        | -45                               | 50    | 95     | 1500                                   | A         | T1   |
| TWAB107*075□BEZ0^00             | 100                          | 75                                 | 2.5                           | 2                   | 10              | 40                                        | -35                               | 6     | 10     | 1400                                   | B         | T2   |
| TWAB117*075□BSZ0000             | 110                          | 75                                 | 1.3                           | 2                   | 10              | 24                                        | -35                               | 6     | 10     | 1650                                   | B         | T2   |
| TWAB117*075□BEZ0^00*            | 110                          | 75                                 | 1.5                           | 2                   | 10              | 30                                        | -35                               | 12    | 20     | 1650                                   | B         | T2   |
| TWAE227*075□BSZ0^00             | 220                          | 75                                 | 1.1                           | 2.5                 | 30              | 20                                        | -50                               | 6     | 10     | 1800                                   | E         | T4   |
| TWAE227*075□BEZ0^00*            | 220                          | 75                                 | 1.1                           | 2.5                 | 30              | 20                                        | -50                               | 6     | 10     | 1800                                   | E         | T4   |
| TWAD337*075□BSZ0^00             | 330                          | 75                                 | 1                             | 3                   | 30              | 12                                        | -45                               | 6     | 10     | 2100                                   | D         | T3   |
| TWAD337*075□BEZ0^00*            | 330                          | 75                                 | 1.2                           | 3                   | 30              | 15                                        | -60                               | 10    | 20     | 2100                                   | D         | T3   |
| TWAE337*075□BEZ0^00             | 330                          | 75                                 | 1                             | 3                   | 40              | 12                                        | -50                               | 6     | 10     | 2200                                   | E         | T4   |
| TWAE477*075□BSZ0^00             | 470                          | 75                                 | 0.9                           | 5                   | 50              | 12                                        | -55                               | 6     | 10     | 2750                                   | E         | T4   |
| TWAE477*075□BEZ0^00*            | 470                          | 75                                 | 0.9                           | 5                   | 50              | 12                                        | -55                               | 6     | 10     | 2750                                   | E         | T4   |
| TWAE687*075□BSZ0^00             | 680                          | 75                                 | 0.7                           | 12                  | 120             | 10                                        | -70                               | 30    | 40     | 2750                                   | E         | T4   |
| TWAE687*075□BEZ0^00             | 680                          | 75                                 | 0.9                           | 11                  | 110             | 10                                        | -70                               | 30    | 40     | 2750                                   | E         | T4   |
| TWAE757*075□BSZ0^00             | 750                          | 75                                 | 0.7                           | 12                  | 120             | 10                                        | -70                               | 30    | 40     | 3800                                   | E         | T4   |
| TWAE757*075□BEZ0^00*            | 750                          | 75                                 | 0.7                           | 12                  | 120             | 10                                        | -70                               | 30    | 40     | 3800                                   | E         | T4   |
| TWAE108*075□BEZ0^00             | 1000                         | 75                                 | 0.5                           | 30                  | 90              | 4.5                                       | -70                               | 30    | 60     | 3500                                   | E         | T4   |
| 100 VDC at 85°C 65 VDC at 125°C |                              |                                    |                               |                     |                 |                                           |                                   |       |        |                                        |           |      |
| TWAA106*100□BSZ0^00             | 10                           | 100                                | 3.5                           | 5                   | 25              | 190                                       | -18                               | 10    | 30     | 1050                                   | A         | T1   |
| TWAA156*100□BSZ0000             | 15                           | 100                                | 3.5                           | 1                   | 5               | 125                                       | -18                               | 3     | 10     | 1050                                   | A         | T1   |
| TWAA156*100□BEZ0^00*            | 15                           | 100                                | 5.5                           | 7                   | 35              | 140                                       | -18                               | 10    | 30     | 1050                                   | A         | T1   |
| TWAB226*100□BSZ0^00             | 22                           | 100                                | 4                             | 1                   | 5               | 100                                       | -10                               | 8     | 15     | 1065                                   | B         | T2   |
| TWAB686*100□BSZ0000             | 68                           | 100                                | 2.1                           | 2                   | 10              | 37                                        | -30                               | 4     | 12     | 1650                                   | B         | T2   |
| TWAB686*100□BEZ0^00*            | 68                           | 100                                | 2.5                           | 2                   | 10              | 37                                        | -30                               | 4     | 12     | 1650                                   | B         | T2   |
| TWAD157*100□BSZ0^00             | 150                          | 100                                | 1.6                           | 3                   | 25              | 22                                        | -35                               | 6     | 12     | 2100                                   | D         | T3   |
| TWAD157*100□BEZ0^00*            | 150                          | 100                                | 1.6                           | 3                   | 25              | 22                                        | -35                               | 6     | 12     | 2100                                   | D         | T3   |
| TWAD227*100□BEZ0^00             | 220                          | 100                                | 1.4                           | 5                   | 25              | 18                                        | -50                               | 10    | 15     | 2500                                   | D         | T3   |
| TWAE227*100□BSZ0^00             | 220                          | 100                                | 1.2                           | 5                   | 50              | 15                                        | -40                               | 6     | 12     | 2750                                   | E         | T4   |
| TWAE227*100□BEZ0^00*            | 220                          | 100                                | 1.2                           | 5                   | 50              | 15                                        | -40                               | 6     | 12     | 2750                                   | E         | T4   |
| TWAE337*100□BSZ0^00             | 330                          | 100                                | 0.8                           | 6                   | 60              | 10                                        | -45                               | 7     | 20     | 3600                                   | E         | T4   |
| TWAE337*100□BEZ0^00*            | 330                          | 100                                | 0.8                           | 6                   | 60              | 10                                        | -45                               | 7     | 20     | 3600                                   | E         | T4   |
| TWAE407*100□BSZ0^00             | 400                          | 100                                | 0.8                           | 10                  | 150             | 10                                        | -50                               | 10    | 35     | 4100                                   | E         | T4   |
| TWAE407*100□BEZ0^00*            | 400                          | 100                                | 0.8                           | 10                  | 150             | 10                                        | -50                               | 10    | 35     | 4100                                   | E         | T4   |
| TWAE477M100□BEZ0^00             | 470                          | 100                                | 0.7                           | 25                  | 250             | 10                                        | -50                               | 10    | 35     | 4100                                   | E         | T4   |
| TWAE567*100□BSZ0^00             | 560                          | 100                                | 1.0                           | 25                  | 200             | 10                                        | -60                               | 45    | 110    | 4100                                   | E         | T4   |
| TWAE757*100□BEZ0^00             | 750                          | 100                                | 0.6                           | 30                  | 150             | 5                                         | -60                               | 30    | 80     | 6700                                   | E         | T4   |
| 125 VDC at 85°C 85 VDC at 125°C |                              |                                    |                               |                     |                 |                                           |                                   |       |        |                                        |           |      |
| TWAA106*125□BSZ0000             | 10                           | 125                                | 5.5                           | 1                   | 5               | 175                                       | -15                               | 3     | 10     | 1050                                   | A         | T1   |
| TWAA106*125□BEZ0^00*            | 10                           | 125                                | 5.5                           | 1                   | 5               | 190                                       | -15                               | 10    | 30     | 1050                                   | A         | T1   |
| TWAB276*125□BSZ0^00             | 27                           | 125                                | 4                             | 2                   | 10              | 100                                       | -10                               | 8     | 15     | 1200                                   | B         | T2   |
| TWAB476*125□BSZ0000             | 47                           | 125                                | 2.3                           | 2                   | 10              | 47                                        | -25                               | 5     | 12     | 1650                                   | B         | T2   |
| TWAB476*125□BEZ0^00*            | 47                           | 125                                | 2.3                           | 2                   | 10              | 47                                        | -25                               | 5     | 12     | 1650                                   | B         | T2   |
| TWAE826*125□BSZ0^00             | 82                           | 125                                | 1.6                           | 2                   | 10              | 39                                        | -24                               | 10    | 20     | 1900                                   | E         | T4   |
| TWAD107*125□BSZ0^00             | 100                          | 125                                | 1.8                           | 3                   | 25              | 35                                        | -35                               | 5     | 12     | 2100                                   | D         | T3   |
| TWAD107*125□BEZ0^00*            | 100                          | 125                                | 1.8                           | 3                   | 25              | 35                                        | -35                               | 5     | 12     | 2100                                   | D         | T3   |
| TWAD127*125□BEZ0^00             | 120                          | 125                                | 1.8                           | 3                   | 25              | 35                                        | -35                               | 5     | 12     | 2100                                   | D         | T3   |
| TWAE157*125□BSZ0^00             | 150                          | 125                                | 1.6                           | 5                   | 50              | 20                                        | -35                               | 6     | 12     | 2750                                   | E         | T4   |
| TWAE157*125□BEZ0^00*            | 150                          | 125                                | 1.6                           | 5                   | 50              | 20                                        | -35                               | 6     | 16     | 2750                                   | E         | T4   |
| TWAE227*125□BEZ0^00             | 220                          | 125                                | 1.4                           | 10                  | 50              | 12                                        | -40                               | 8     | 15     | 3600                                   | 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.

\*Not recommended for new designs, for new design use part number with Inspection level "S" – COTS-Plus

DF = 2πfC x (ESR)

2π = 6.28

f = 120Hz

C = Actual measured capacitance

ESR = Actual measured ESR