






Solid and Wet Tantalum Capacitor Selector Guide

Solid Tantalum Electrolytic Capacitors


| Form Factor | Type | Cap Range (μ F) | Volts (Vdc) | Tolerance (%) | Temp Range ** ($^{\circ}$ C) | Case Size (Inches) | Case Size (mm) | Application | Highlights | Page |
|---|-----------------|-----------------------------------|-----------------------------------|-----------------------------------|----------------------------------|-----------------------|-------------------------------|--|---|-------|
| Hermetically Sealed / Axial Leaded | | | | | | (D x L) | | | | |
|  | TAS | 0.004 | 6 | $\pm 5^*$ | -55 | .135 x .286 | 3.43 x 7.26 | Gen. Purpose High Moisture | Low DF Small Size Fq. Stable | 8.002 |
| | | to | to | ± 10 | to | to | to | | | |
| | 330 | 100 | ± 20 | +125 ** | .351 x .786 | 8.92 x 19.96 | | | | |
| TXA | 1.2 | 6 | $\pm 5^*$ | -55 | .135 x .286 | 3.43 x 7.26 | Gen. Purpose High Moisture | High Cap Fq. Stable | 8.007 | |
| | to | to | ± 10 | to | to | to | | | | |
| 1,000 | 50 | ± 20 | +125 ** | .351 x .786 | 8.92 x 19.96 | | | | | |
| THF | 5.6 | 6 | $\pm 5^*$ | -55 | .289 x .686 | 7.34 x 17.42 | Gen. Purpose High Moisture | High Current Low ESR Low Imped. | 8.010 | |
| | to | to | ± 10 | to | to | to | | | | |
| 330 | 50 | ± 20 | +125 ** | .351 x .786 | 8.92 x 19.96 | | | | | |
| Molded Case | | | | | | (D x L) / (H x W x T) | | | | |
|  | TAC | 0.1 | 6 | $\pm 5^*$ | -55 | .095 x .260 | 2.41 x 6.35 | Auto Insert Tape & Reel Gen. Purpose | Axial Leaded High CV | 8.012 |
| | | to | to | ± 10 | to | to | to | | | |
| 330 | 50 | ± 20 | +125 ** | .300 x .710 | 7.62 x 19.96 | | | | | |
|  | TIM | 0.1 | 6 | $\pm 5^*$ | -55 | .345x.230x.105 | 8.76x5.84x2.67 | Gen. Purpose | Radial Leaded Low ESR | 8.016 |
| | | to | to | ± 10 | to | to | to | | | |
| 220 | 50 | ± 20 | +125 ** | .375x.600x.195 | 9.53x15.24x4.95 | | | | | |
| Dipped | | | | | | (D x H) | | | | |
|  | TDC | 0.1 | 6 | $\pm 5^*$ | -55 | .175 x .350 | 4.45x8.89 to | Gen. Purpose | Low Cost Low DCL Low ESR | 8.020 |
| | | to | to | ± 10 | to | .350x.650 | 8.89x16.51 | | | |
| | | 330 | 50 | ± 20 | +125 ** | L/S .125, .250 | L/S 3.18, 6.35 | | | |
| | TDL | 0.1 | 6 | $\pm 5^*$ | -55 | .180x.280 to | 4.57x7.11 to | Gen. Purpose | Low Profile Low DCL Low ESR | 8.024 |
| to | | to | ± 10 | to | .440x.680 | 11.18x17.27 | | | | |
| 330 | 50 | ± 20 | +125 ** | L/S .100, .200 | L/S 2.54, 5.08 | | | | | |
| Surface Mount | | | | | | (L x W x H) | | | | |
|  | T491 | 0.1 | 4 | ± 10 | -55 | .126x.063x.063 | 3.20x4.29x1.60 | Gen. Purpose Tape & Reel | EIA Standards IEQC Standards Molded | 7.054 |
| | | to | to | ± 20 only by special order | to | to | to | | | |
| | | 220 | 50 | ± 20 only by special order | +125 ** | .287x.169x.157 | 7.29x4.29x3.99 | | | |
| | T492 (CWR11) | 0.1 | 4 | ± 10 | -55 | .126x.063x.063 | 3.20x4.29x1.60 | Gen. Purpose Tape & Reel | EIA Standards IEQC Standards Molded | 8.040 |
| | | to | to | ± 20 only by special order | to | to | to | | | |
| | 47 | 35 | ± 20 only by special order | +125 ** | .287x.169x.110 | 7.29x4.29x2.79 | | | | |
| | T494 | 0.68 | 2.7 | ± 10 | -55 | .126x.063x.047 | 3.20x4.29x1.19 | Gen. Purpose Tape & Reel | EIA Standards IEQC Standards Molded | 8.040 |
| | | to | to | ± 20 only by special order | to | to | to | | | |
| | 470 | 20 | ± 20 only by special order | +125 ** | .287x.169x.079 | 7.29x4.29x2.01 | | | | |
| | T495 | 4.7 | 6 | ± 10 | -55 | .287x.169x.110 | 3.20x4.29x2.79 | Gen. Purpose Tape & Reel | EIA Standards IEQC Standards Molded | 7.058 |
| to | | to | ± 20 only by special order | to | to | to | | | | |
| 150 | 50 | ± 20 only by special order | +125 ** | .287x.169x.157 | 7.29x4.29x3.99 | | | | | |
| T496 | 0.15 | 4 | ± 10 | -55 | .138x.110x.075 | 3.51x2.79x1.91 | Gen. Purpose Tape & Reel | EIA Standards IEQC Standards Molded | 8.040 | |
| | to | to | ± 20 only by special order | to | to | to | | | | |
| 100 | 50 | ± 20 only by special order | +125 ** | .287x.169x.157 | 7.29x4.29x3.99 | | | | | |

* $\pm 5\%$ tolerance by special order only.

** Rated voltage is derated above 85 $^{\circ}$ C - see ratings table

Solid and Wet Tantalum Capacitor Selector Guide


Solid Tantalum Electrolytic Capacitors

| Form Factor | MIL Specifications | Cap Range (µF) | Volts (Vdc) | Tolerance (%) | Temp Range ** (°C) | Case Size (Inches) | Case Size (mm) | MIL QPL App'vs Failure Rate Levels | Highlights | Page |
|---|--------------------|---------------------|----------------|----------------------------|---------------------|----------------------------------|------------------------------------|---|--|-------|
| Military - Established Reliability | | | | | | (D x L) | | | | |
|  | M39003/01 CSR13 | 0.004 to 330 | 6 to 100 | ±5%* to ±10% ±20% | -55 to +125** | .135 x .288 to .351 x .786 | 3.43 x 7.32 to 8.92 x 19.96 | Exponential: M, P, R, S Weibull: B, C, D | Graded Reliability Low DC Leakage Temp. Stable Long Shelf Life | 8.040 |
| | M39003/02 CSR09 | 0.047 to 18 | 6 to 75 | ±5%* to ±10% ±20% | -55 to +125** | .090 x .250 to .138 x .390 | 2.29 x 6.35 to 3.51 x 9.91 | Exponential: M, P, R, S Weibull: B, C, D | Graded Reliability Miniature Long Shelf Life | 8.040 |
| | M39003/04 CSR91 | 0.0023 to 160 | 6 to 100 | ±5%* to ±10% ±20% | -55 to +125** | .161 x .575 to .376 x 1.55 | 4.09 x 14.61 to 9.55 x 39.37 | Exponential: M, P, R, S Weibull: B, C, D | Non-polar Graded Reliability Low DC Leakage Long Shelf Life | 8.040 |
| | M39003/06 CSR33 | 1.2 to 1,000 | 6 to 50 | ±5%* to ±10% ±20% | -55 to +125** | .135 x .286 to .351 x .786 | 3.43 x 7.26 to 8.92 x 19.96 | Exponential: M, P, R, S Weibull: B, C, D | Extended Range Graded Reliability Low DC Leakage Long Shelf Life | 8.040 |
| | M39003/09 CSR21 | 5.6 to 330 | 6 to 50 | ±5%* to ±10% ±20% | -55 to +125** | .289 x .686 to .351 x .786 | 7.34 x 17.42 to 8.92 x 19.96 | Exponential: M, P, R, S Weibull: B, C, D | High Ripple Current Low Impedance Low ESR Low DC Leakage | 8.040 |
| | M39003/03 CSR23 | 1.2 to 1,000 | 6 to 50 | ±5%* to ±10% ±20% | -55 to +125** | .135 x .286 to .351 x .786 | 3.43 x 7.26 to 8.92 x 19.96 | Exponential: M, P, R, S Weibull: B, C, D | Extend. Capacitance Graded Reliability Low DC Leakage Long Shelf Life | 8.040 |

* ±5% tolerance by special order only.

** Rated voltage is derated above 85 °C - see ratings table

Wet Tantalum Electrolytic Capacitors

| Axial Leaded, Hermetically Sealed | | | | | | | | | | |
|--|-----------------------|-------------------|----------------|---------------------------|---------------------|--|---|------------------------------------|--|-------|
| Form Factor | Commercial (Military) | Cap Range (µF) | Volts (Vdc) | Tolerance (%) | Temp Range ** (°C) | Case Size Insulated In (mm) | Case Size Uninsulated In (mm) | MIL QPL App'vs Failure Rate Levels | Highlights | Page |
|  | TAT (CLR79) | 1.7 to 1200 | 6 to 125 | ±5% to ±10% ±20% | -55 to +125** | .201(5.1)x4.75(12.1) to 3.87(9.9)x1.05(26.6) | .232(5.9)x.640(16.3) to 4.18(10.6)x1.20(30.5) | MIL C 39006/22 M, P, R | Low ESR, DCL High Ripple Tantalum Case | 8.026 |
| | TAX (CLR81) | 6.8 to 2200 | 6 to 125 | ±5% to ±10% ±20% | -55 to +125** | .201(5.1)x4.75(12.1) to 3.87(9.9)x1.05(26.6) | .232(5.9)x.640(16.3) to 4.18(10.6)x1.20(30.5) | MIL C 39006/25 M, P, R | Low ESR, DCL High Ripple Tantalum Case | 8.026 |

** Rated voltage is derated above 85 °C - see ratings table