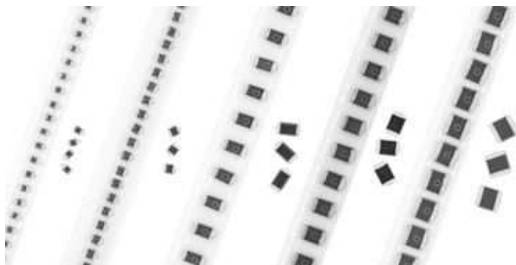


Solid Tantalum Chip Capacitors TANTAMOUNT[®], Low Profile, Conformal Coated

Application Specific Pulse Capacitor for Wireless Modems



FEATURES

- Robust design for use in wireless modem applications
- Designed specifically for pulsed operation
- 100 % surge current tested
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

PERFORMANCE CHARACTERISTICS

www.vishay.com/doc?40088

Operating Temperature: - 55 °C to + 125 °C
(with voltage derating)

Capacitance Tolerance: ± 20 % standard

Capacitance Range: 330 µF to 2200 µF

Voltage Rating: 6.3 V_{DC} to 10 V_{DC}

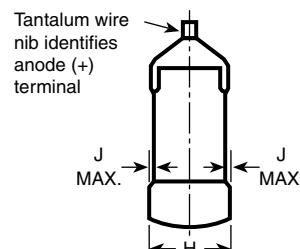
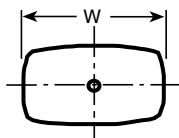
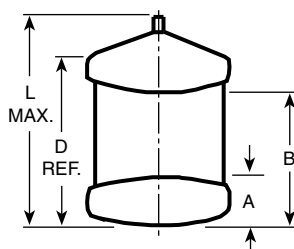
ORDERING INFORMATION

| 592W | 757 | X0 | 010 | M | 2 | T | 20H |
|------|--|-----------------------|--|----------------------------------|---------------|-----------------------------|------------------------------------|
| TYPE | CAPACITANCE | CAPACITANCE TOLERANCE | DC VOLTAGE RATING AT + 85 °C | CASE CODE | TERMINATION | REEL SIZE AND PACKAGING | SUFFIX |
| | This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow. | X0 = ± 20 % | This is expressed in volts. To complete the three-digit block, zeros precede the voltage rating. A decimal point is indicated by an "R" (6R3 = 6.3 V). | See Ratings and Case Codes table | 2 = 100 % tin | T = 7" [178 mm] reel | Maximum height (mm) see dimensions |

Note

- Preferred tolerance and reel sizes are in bold.
We reserve the right to supply higher voltage ratings and tighter capacitance tolerance capacitors in the same case size.

DIMENSIONS in inches [millimeters]



| CASE CODE | SUFFIX | H | L MAX. | W | A | B | D REF. | J MAX. |
|-----------|--------|------------------|--------------|---|---------------------------|----------------------------|--------------|-------------|
| C | 16H | 0.063 [1.6] max. | 0.280 [7.1] | 0.126 ± 0.012 [3.2 ± 0.3] | 0.051 ± 0.012 [1.3 ± 0.3] | 0.173 ± 0.024 [4.4 ± 0.6] | 0.236 [6.0] | 0.004 [0.1] |
| | 20H | 0.079 [2.0] max. | | | | | | |
| M | 20H | 0.063 [1.6] max. | 0.295 [7.5] | 0.248 ± 0.012 [6.3 ± 0.3] | 0.051 ± 0.012 [1.3 ± 0.3] | 0.200 ± 0.024 [5.1 ± 0.6] | 0.264 [6.7] | 0.004 [0.1] |
| | 20H | 0.079 [2.0] max. | | | | | | |
| X | 16H | 0.063 [1.6] max. | 0.571 [14.5] | 0.290 + 0.010/- 0.020 [7.37 + 0.25/- 0.5] | 0.051 ± 0.016 [1.3 ± 0.4] | 0.469 ± 0.024 [11.9 ± 0.6] | 0.520 [13.2] | 0.004 [0.1] |
| | 20H | 0.079 [2.0] max. | | | | | | |

**RATINGS AND CASE CODES**

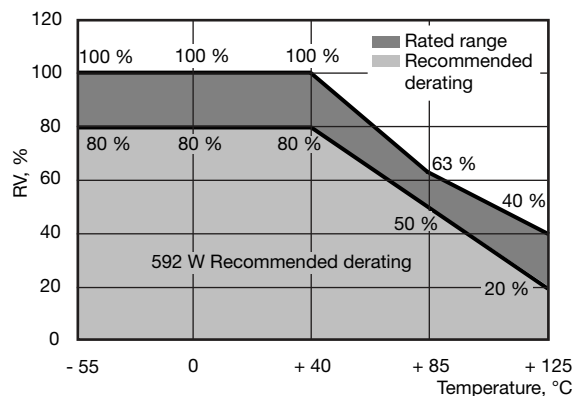
| μF | 6.3 V | 8.2 V | 10 V |
|---------------|-------|----------------------|-------|
| 330 | | | C_2.0 |
| 470 | C_1.6 | C_2.0 | |
| 680 | | | |
| 750 | | | M_2.0 |
| 1000 | | | X_2.0 |
| 1500 | | M_2.0 ⁽¹⁾ | |
| 2200 | X_1.6 | | |

Note⁽¹⁾ Preliminary value, contact factory for availability**STANDARD RATINGS**

| CAPACITANCE (μF) | CASE CODE | PART NUMBER | MAX. HEIGHT (mm) | MAX. DCL AT + 25 °C (μA) | MAX. DF AT + 25 °C 120 Hz (%) | MAX. ESR AT + 25 °C 100 kHz (Ω) |
|---|------------------|--------------------|---------------------|---|--|---|
| 6.3 V_{DC} AT + 40 °C; 4.0 V_{DC} AT + 85 °C; 2.5 V_{DC} AT + 125 °C | | | | | | |
| 470 | C | 592W477X06R3C2T16H | 1.6 | 30 | 14 | 0.200 |
| 2200 | X | 592W228X06R3X2T16H | 1.6 | 139 | 45 | 0.070 |
| 8.2 V_{DC} AT + 40 °C; 5.2 V_{DC} AT + 85 °C; 3.3 V_{DC} AT + 125 °C | | | | | | |
| 470 | C | 592W477X08R2C2T20H | 2.0 | 57 | 20 | 0.100 |
| 1500 | M ⁽¹⁾ | 592W158X08R2M2T20H | 2.0 | 125 | 45 | 0.090 |
| 10 V_{DC} AT + 40 °C; 6.3 V_{DC} AT + 85 °C; 4.0 V_{DC} AT + 125 °C | | | | | | |
| 330 | C | 592W337X0010C2T20H | 2.0 | 33 | 20 | 0.100 |
| 750 | M | 592W757X0010M2T20H | 2.0 | 75 | 35 | 0.100 |
| 1000 | X | 592W108X0010X2T20H | 2.0 | 100 | 35 | 0.080 |

Note⁽¹⁾ Preliminary value, contact factory for availability**ELECTRICAL PERFORMANCE CHARACTERISTICS**

| ITEM | PERFORMANCE CHARACTERISTICS | | | | | |
|--------------------------------|--|------------------|-------|-------|-------|-------|
| Category temperature range | - 55 °C to + 125 °C (with voltage derating) | | | | | |
| Capacitance tolerance | $\pm 20\%$, $\pm 10\%$ (at 120 Hz) 2 V _{RMS} at + 25 °C using a capacitance bridge | | | | | |
| Dissipation factor (at 120 Hz) | Limits per Standard Ratings table. Tested via bridge method, at 25 °C, 120 Hz | | | | | |
| ESR (100 kHz) | Limits per Standard Ratings table. Tested via bridge method, at 25 °C, 100 kHz | | | | | |
| Leakage current | After application of RV applied to capacitors for 5 min using a steady source of power with 1 k Ω resistor in series with the capacitor under test, leakage current at 25 °C is not more than described in. | | | | | |
| Operation temperatures | Rated voltage | - 55 °C/+ 40 °C | 10 V | 8.2 V | 6.3 V | 4.0 V |
| | Category voltage | + 40 °C/+ 85 °C | 6.3 V | 5.2 V | 4.0 V | 2.5 V |
| | Category voltage | + 85 °C/+ 125 °C | 4 V | 3.3 V | 2.5 V | 1.6 V |

**VOLTAGE VS. TEMPERATURE RATING****POWER DISSIPATION**

| CASE CODE | HEIGHT | MAXIMUM PERMISSIBLE POWER DISSIPATION AT + 25 °C (W) IN FREE AIR |
|-----------|--------|--|
| C | 16H | 0.100 |
| C | 20H | 0.110 |
| M | 20H | 0.175 |
| X | 16H | 0.170 |
| X | 20H | 0.175 |

STANDARD PACKAGING QUANTITY

| CASE CODE | HEIGHT | UNITS PER REEL, 7" REEL |
|-----------|--------|-------------------------|
| C | Any | 1000 |
| M | Any | 1000 |
| X | Any | 500 |

PRODUCT INFORMATION

| | |
|--------------------------------|--|
| Conformal Coated Guide | www.vishay.com/doc?40150 |
| Pad Dimensions | Link to specified table in Application Guidelines |
| Packaging Dimensions | |
| Moisture Sensitivity | www.vishay.com/doc?40135 |
| SELECTOR GUIDES | |
| Solid Tantalum Selector Guide | www.vishay.com/doc?49053 |
| Solid Tantalum Chip Capacitors | www.vishay.com/doc?40091 |
| FAQ | |
| Frequently Asked Questions | www.vishay.com/doc?40110 |



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