Solid Tantalum Surface-Mount Capacitors, Hi-Rel, Built-in-Fuse, Molded

KEY BENEFITS

- Robust design
- Hi-Rel screening IAW MIL-PRF-55365
- Individually fused multiple anode construction ensures fail-safe operation and graceful degradation in the event of failure
- High capacitance (up to 470 µF); high voltage (up to 75 V rated)

APPLICATIONS

- Avionics
- Military
- Space

RESOURCES

- Datasheet: T42 - www.vishay.com/doc?40165
- For technical questions contact tantalum@vishay.com
- Material categorization: For definitions of compliance please see http://www.vishay.com/doc?99912

RoHS* Available
Solid Tantalum Surface-Mount Capacitors, Hi-Rel, Built-in-Fuse, Molded

**PERFORMANCE CHARACTERISTICS**

- **Operating Temperature:** -55 °C to +125 °C (above 85 °C, voltage derating is required)
- **Capacitance:** 10 µF to 470 µF
- **Capacitance Tolerance:** ± 10 %, ± 20 %
- **Voltage Rating:** 16 VDC to 75 VDC

**FEATURES**

- Circuit protection for mission or safety critical systems
- High-reliability design with reliability screening available
- Surge current testing per MIL-PRF-55365 options available
- Ultra-low ESR
- Fuse characteristics: guaranteed fuse protection at 5 A, 10 ms
- Fuse characteristics are optimized to ensure activation to protect against catastrophic failures while avoiding false triggering
- Mounting: surface-mount
- Terminations: wraparound SnPb, standard. 100 % tin available
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

**Note**

- This datasheet provides information about parts that are RoHS-compliant and/or parts that are non-RoHS-compliant. For example, parts with lead (Pb) terminations are not RoHS-compliant. Please see the information/tables in this datasheet for details.

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>T42</th>
<th>M2</th>
<th>CASE CODE</th>
<th>CAPACITANCE</th>
<th>CAPACITANCE TOLERANCE</th>
<th>DC VOLTAGE RATING AT +85 °C</th>
<th>TERMINATION/ PACKAGING</th>
<th>RELIABILITY LEVEL</th>
<th>SURGE CURRENT</th>
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<td>This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.</td>
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<td>E = Sn/Pb solder/ 7° (178 mm) reel</td>
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<td>This is expressed in volts. To complete the three-digit block, zeros precede the voltage rating. A decimal point is indicated by an &quot;R&quot; (6R3 = 6.3 V)</td>
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<td>L = Sn/Pb solder/ 7° (178 mm), 1/2 reel</td>
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<td>C = 100 % tin/ 7° (178 mm), reel</td>
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<td>H = 100 % tin/ 7° (178 mm), 1/2 reel</td>
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<td>S = 40 h burn-in Z = Non-established reliability</td>
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<td>A = 10 cycles at +25 °C B = 10 cycles at -55 °C/ +85 °C</td>
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**DIMENSIONS** in inches [millimeters]

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<thead>
<tr>
<th>CASE CODE</th>
<th>L</th>
<th>W</th>
<th>H</th>
<th>P1</th>
<th>P2 (REF.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2</td>
<td>0.319 ± 0.008 [8.1 ± 0.2]</td>
<td>0.276 ± 0.008 [7.0 ± 0.2]</td>
<td>0.177 max. [4.5 max.]</td>
<td>0.060 ± 0.004 [1.5 ± 0.1]</td>
<td>0.207 [5.25]</td>
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**Note**

- We reserve the right to supply higher voltage ratings and tighter capacitance tolerance capacitors in the same case size. Low ESR solid tantalum chip capacitors allow delta ESR of 1.25 times the datasheet limits after mounting.

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**ORDERING INFORMATION**

- For technical questions, contact: tantalum@vishay.com
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