



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



Maximum Performance - Maximum Safety

### 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  $\mu$ F); high voltage (up to 75 V rated)

### APPLICATIONS

- Avionics
- Military
- Space

### RESOURCES

- Datasheet: T42 - [www.vishay.com/doc?40165](http://www.vishay.com/doc?40165)
- For technical questions contact [tantalum@vishay.com](mailto:tantalum@vishay.com)
- Material categorization: For definitions of compliance please see <http://www.vishay.com/doc?99912>



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# TANTALUM CAPACITORS

T42

Capacitors - Maximum Performance - Maximum Safety

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### 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 V<sub>DC</sub> to 75 V<sub>DC</sub>

### 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](http://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							
T42	M2	227	M	025	E	S	A
TYPE	CASE CODE	CAPACITANCE	CAPACITANCE TOLERANCE	DC VOLTAGE RATING AT +85 °C	TERMINATION/PACKAGING (available options are series dependent)	RELIABILITY LEVEL	SURGE CURRENT
	See Ratings and Case Codes table	This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.	K = ± 10 % M = ± 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)	E = Sn/Pb solder/ 7" (178 mm) reel L = Sn/Pb solder/ 7" (178 mm), 1/2 reel C = 100 % tin/ 7" (178 mm), reel H = 100 % tin/ 7" (178 mm), 1/2 reel	S = 40 h burn-in Z = Non-established reliability	A = 10 cycles at +25 °C B = 10 cycles at -55 °C/ +85 °C

### 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.

DIMENSIONS in inches [millimeters]					
CASE CODE	L	W	H	P1	P2 (REF.)
M2	0.319 ± 0.008 [8.1 ± 0.2]	0.276 ± 0.008 [7.0 ± 0.2]	0.177 max. [4.5 max.]	0.060 ± 0.004 [1.5 ± 0.1]	0.207 [5.25]

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