

SuperTan® Wet Tantalum, Hermetically-Sealed Capacitor



Capacitors - DSCC 93026 approved,
reliable operation in high-vibration environments

KEY BENEFITS

- Provides the highest capacitance per unit volume
- Excellent temperature capability: - 55 °C to + 125 °C
- Very low ESR: typically 0.2 Ω to 1 Ω (depending on frequency)
- High ripple current rating: up to 3 A (depending on case size and voltage)
- Reliable operation in high-vibration environments
- DSCC 93026 approved

APPLICATIONS

- Airborne, shipboard and ground-based support power supplies
- High-reliability and power management systems
- Commercial aircraft
- Oil and gas exploration equipment

RESOURCES

- Datasheets:
 - ST <http://www.vishay.com/doc?43000>
 - DSCC <http://www.vishay.com/doc?40136>
- Wet tantalum capacitor product portfolio: <http://www.vishay.com/capacitors/tantalum/tantalum-wet/>
- FIT calculator: <http://www.vishay.com/capacitors/tantalum/capacitors/tantalum/tantalum-wet/tantalum-reliability-calculator-list/>
- Technical support: tantalum@vishay.com
- Sales Contacts: <http://www.vishay.com/doc?99914>



TANTALUM CAPACITORS

ST/DSCC 93026



SuperTan® Wet Tantalum, Hermetically-Sealed Capacitor



FEATURES

- Terminations: Std. tin/lead (Sn/Pb) 100 % tin (RoHS compliant) available terminations
- Very high capacitance, 10 μF to 1800 μF
- 25 V_{DC} to 125 V_{DC}
- -55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$
- Very low ESR
- High ripple current
- All tantalum case, hermetically sealed
- Low DCL
- Compliant to RoHS Directive 2002/95/EC



RoHS*
COMPLIANT

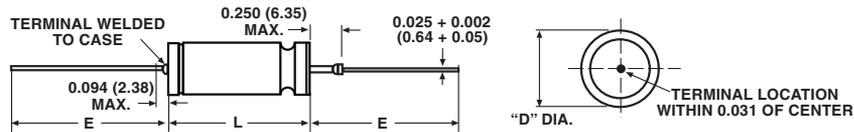
APPLICATION NOTES

- No continuous reverse voltage permissible.
- The peak of the applied AC ripple and the applied DC voltage must not exceed the DC voltage rating of the capacitor.
- Ripple current ratings by part number at 85 $^{\circ}\text{C}$ and 40 kHz are included in the table. Ripple current correction factors for other temperatures and frequencies are given on the next page.
- Transient reverse voltage surges are acceptable under the following conditions:
The peak reverse voltage does not exceed 1.5 V and the peak current times the duration of the reverse transient does not exceed 0.05 As. In addition, the repetition frequency of the reverse voltage surge is less than 10 Hz.

Vishay ST/DSCC 93026 represents a major breakthrough in wet tantalum capacitor technology. Its unique cathode system provides the highest capacitance per unit volume. The design facilitates a doubling of capacitance, lower ESR and higher ripple current rating compared with conventional wet tantalum products. Moreover, the ST has the capacitance stability of a solid tantalum capacitor and there are no circuit impedance restrictions.

The ST/DSCC 93026 is housed in an all tantalum, hermetically sealed case and is manufactured to withstand hazardous environments. The ST/DSCC 93026 is used widely in the defense and aerospace industries and whenever there is a space problem

DIMENSIONS in inches (millimeters)



CASE CODE	D MAX. INSULATED	D \pm 0.016 (0.41)	L + 0.031 (0.79) UNINSULATED	E \pm 0.250 (6.35) MAX.
T1	0.219 (5.56)	0.188 (4.78)	0.453 (11.51)	1.500 (38.10)
T2	0.312 (7.92)	0.281 (7.14)	0.641 (16.28)	2.250 (57.15)
L2	0.312 (7.92)	0.281 (7.14)	1.008 (25.60)	2.250 (57.15)
T3	0.406 (10.31)	0.375 (9.52)	0.766 (19.46)	2.250 (57.15)
T4	0.406 (10.31)	0.375 (9.52)	1.062 (26.97)	2.250 (57.15)

Notes

- Material at egress is tantalum
- Insulation sleeving will lap over the ends of the capacitor case.
- Tinned nickel leads, solderable and weldable

Approx. Weight

T1: 2.3 g, T2: 5.7 g
T3: 9.4 g, T4: 14.8 g

ST ORDERING INFORMATION

ST	220	-100	T4	M	I	E3
SUPERTAN COMMERCIAL CAP. TYPE	CAPACITANCE μF	85 $^{\circ}\text{C}$ RATED DC VOLTAGE	CASE CODE	CAPACITANCE TOLERANCE	INSULATING SLEEVE	RoHS COMPLIANT
				M = \pm 20 % K = \pm 10 %	I = Insulated X = Uninsulated	E3 = 100 % tin termination (RoHS compliant) Blank = SnPb termination (standard design)

DSCC 93026 ORDERING INFORMATION

93026	-29	K	S
DSCC DRAWING NUMBER	DASH NUMBER	CAPACITANCE TOLERANCE	
		K = \pm 10 % M = \pm 20 %	S = Sleeved U = Unsleeved

DEFENSE SUPPLY CENTER, COLUMBUS
COLUMBUS, OHIO

DRAWING NO.
93026

* Pb containing terminations are not RoHS compliant, exemptions may apply

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