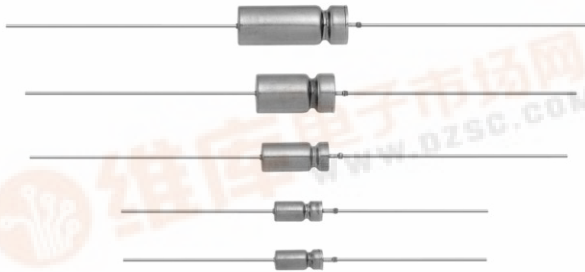




134D

Vishay Sprague

## Wet Tantalum HI TMP® Capacitors Tantalum-Case with Glass-to-Tantalum Hermetic Seal for - 55 °C to + 200 °C Operation



### FEATURES

Vishay 134D HI TMP® represents a major breakthrough in wet tantalum capacitor technology for high temperature (+ 200 °C) applications such as that seen in the petroleum exploration industry. Its unique design provides for the highest capacitance per unit volume. The design facilitates a doubling of capacitance when compared with conventional wet tantalum products.

The 134D is housed in an all tantalum, hermetically sealed case and is manufactured to withstand high stress and hazardous environments.



RoHS\*  
COMPLIANT

- Terminations: standard tin/lead (SnPb)
- 100 % Tin (RoHS compliant) available

### PERFORMANCE CHARACTERISTICS

**Operating Temperature:** - 55 °C to + 85 °C (to + 200 °C with voltage derating)

**Capacitance Tolerance:** At 120 Hz, + 25 °C; ± 20 % standard; ± 10 %

**DC Leakage Current (DCL Max.):** At + 25 °C and above: Leakage current shall not exceed the values listed in the Standard Ratings Tables.

**Life Test:** Capacitors are capable of withstanding a 500 h life test at a temperature of + 200 °C at the applicable derated DC working voltage.

ORDERING INFORMATION						
134D	227	X0	100	K	6	E3
TYPE	CAPACITANCE	CAPACITANCE TOLERANCE	DC VOLTAGE RATING AT + 85 °C	CASE CODE	STYLE NUMBER	ROHS COMPLIANT
This is expressed in picofarads. The first two digits are the significant figures. The third is the number of zeros to follow.	X0 = ± 20 % X9 = ± 10 %	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.	High Temperature 8 = No outer insulating sleeve 6 = High temperature film insulation (above + 125 °C)	E3 = 100 % tin termination (RoHS compliant design) Blank = SnPb termination (standard design)	

**Note**

**Packaging:** The use of formed plastic trays for packaging this type of axial lead component is standard. Tape and reel is not recommended due to the unit weight.



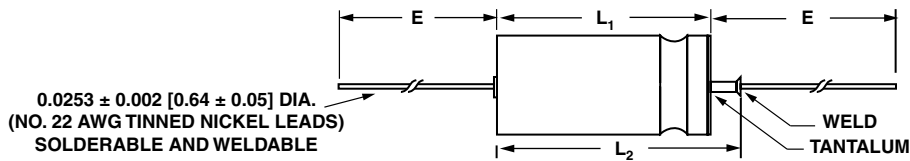
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### DIMENSIONS in inches [millimeters]



CASE CODE		D	L <sub>1</sub>	L <sub>2</sub> (Max.)	E	WEIGHT (g) (Max.)
TYPE 134D	CLR 79/81 EQUIV.					
C	T1	0.188 ± 0.016 [4.78 ± 0.41]	0.453 + 0.031 - 0.016 [11.51 + 0.79 - 0.41]	0.734 [18.64]	1.500 ± 0.250 [38.10 ± 6.35]	2.6
F	T2	0.281 ± 0.016 [7.14 ± 0.41]	0.641 + 0.031 - 0.016 [16.28 + 0.79 - 0.41]	0.922 [23.42]	2.250 ± 0.250 [57.15 ± 6.35]	6.2
T	T3	0.375 ± 0.016 [9.53 ± 0.41]	0.766 + 0.031 - 0.016 [19.46 + 0.79 - 0.41]	1.047 [26.59]	2.250 ± 0.250 [57.15 ± 6.35]	11.6
K	T4	0.375 ± 0.016 [9.53 ± 0.41]	1.062 + 0.031 - 0.016 [26.97 + 0.79 - 0.41]	1.343 [34.11]	2.250 ± 0.250 [57.15 ± 6.35]	17.7

### STANDARD RATINGS

CAPACITANCE AT 25 °C AND 120 Hz	CASE CODE	MAX. 120 Hz ESR Ω	MAX. DCL μA		MAXIMUM		TYPICAL				AC RIPPLE (1) 85 °C 40 kHz mA rms
			25 °C	85 °C AND 125 °C	IMP, Z AT -25 °C Ω	ΔCAP. AT -25 °C	IMP, Z AT -55 °C Ω	ΔCAP. AT -55 °C %	ΔCAP. + 85 °C %	ΔCAP. + 125 °C %	
<b>50 VDC AT 85 °C ... 30 VDC AT 125 °C ... 30 VDC AT 200 °C</b>											
68	C	1.50	1	5	22	- 6 %	25	- 11 %	12 %	55 %	1400
220	F	0.90	2	10	9	- 15 %	10	- 25 %	13 %	50 %	2300
470	T	0.75	3	25	6	- 24 %	8	- 50 %	10 %	25 %	2650
680	K	0.70	5	40	4	- 22 %	5	- 40 %	12 %	40 %	2900
<b>60 VDC AT 85 °C ... 40 VDC AT 125 °C ... 36 VDC AT 200 °C</b>											
47	C	2.00	1	5	34	- 8 %	40	- 20 %	8 %	12 %	1250
150	F	1.10	2	10	13	- 11 %	15	- 25 %	10 %	30 %	2050
390	T	0.90	3	25	7	- 27 %	10	- 50 %	10 %	25 %	2450
560	K	0.80	5	40	5	- 21 %	6	- 40 %	12 %	40 %	2700
<b>75 VDC AT 85 °C ... 50 VDC AT 125 °C ... 45 VDC AT 200 °C</b>											
33	C	2.50	1	5	45	- 3.5 %	50	- 6 %	8 %	25 %	1100
110	F	1.30	2	10	16	- 8 %	20	- 18 %	8 %	30 %	1900
330	T	1.00	3	30	8	- 30 %	12	- 50 %	10 %	25 %	2300
470	K	0.90	5	50	6	- 20 %	7	- 40 %	10 %	40 %	2550
<b>100 WVDC AT 85 °C ... 65 WVDC AT 125 °C ... 60 WVDC AT 200 °C</b>											
15	C	3.50	1	5	95	- 2.5 %	100	- 4 %	8 %	25 %	950
68	F	2.10	2	10	25	- 6 %	30	- 14 %	8 %	25 %	1500
150	T	1.60	3	25	14	- 12 %	18	- 30 %	8 %	22 %	1800
220	K	1.20	5	50	13	- 44 %	16	- 55 %	8 %	15 %	2200
<b>125 VDC AT 85 °C ... 85 VDC AT 125 °C ... 75 VDC AT 200 °C</b>											
10	C	5.50	1	5	145	- 2.5 %	150	- 4 %	8 %	20 %	750
47	F	2.30	2	10	35	- 5 %	40	- 12 %	7 %	20 %	1450
50	F	2.30	3	10	35	- 5 %	40	- 12 %	7 %	20 %	1450
100	T	1.80	3	25	24	- 20 %	30	- 35 %	8 %	20 %	1700
150	K	1.60	5	50	13	- 10 %	16	- 28 %	6 %	12 %	1900

**Note**

(1) For insulated parts, add 0.015 inches [0.38] to the diameter. The insulation shall lap over the ends of the capacitor body.



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