

Tantalum-Cased-Tantalum Sintered Anode TANTALEX[®] Capacitors for Operation to + 125 °C



Type 285D capacitors are commercial replacements for Military Style M39006/01,02, 03, 04, 16, 17 and are designed to meet the performance requirements of Military Specification MIL-C-39006. Internal cells are M39006/22 and 25

PERFORMANCE CHARACTERISTICS

Operating Temperature: - 55 °C to + 85 °C
(To + 125 °C with voltage derating)

Capacitance Tolerance: At 120 Hz, + 25 °C. ± 20 %
standard, ± 10 %, ± 5 % available as special

DC Leakage Current (DCL Max.):
At + 25 °C, + 85 °C, + 125 °C: Leakage current shall not exceed the values listed in the Standard Ratings Tables

FEATURES

- High ripple current capability
- Extended temperature range
- Very low impedances over wide frequency ranges
- Long history of reliable operation

Life Test: Capacitors are capable of withstanding a 2000 h life test at a temperature of + 85 °C or + 125 °C at the applicable DC working voltage.

Following the life test:

1. DCL shall not exceed the initial requirement.
2. Dissipation Factor shall meet the initial requirement.
3. Change in capacitance shall not exceed 10 % from the initial measurement. For capacitors with voltage ratings of 15 WVDC and below, change in capacitance shall not exceed + 10 %, - 25 % from the initial measurement.

ORDERING INFORMATION						
285D	126	X0	250	B	0	
MODEL	CAPACITANCE	CAPACITANCE TOLERANCE	DC VOLTAGE RATING AT + 85 °C	CASE CODE	STYLE NUMBER	PACKAGING
	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 = ± 20 %	This is expressed in volts. To complete the three-digit block, zeros precede the voltage rating	See Ratings and Case Codes Table	0 = No outer tube 2 = Outer polyester-film insulation	The use of formed plastic trays for packaging this type of axial lead components is standard. Tape and reel is not recommended because of the unit weight and size

DIMENSIONS in inches [millimeters]				
Case Material: Aluminum Case Neutral				
CASE CODE	BARE CASE		WITH INSULATION SLEEVE	
	D ± 0.010	L ± 0.062	D (MAX.)	L
A	0.385	1.850	0.406	(Sleeve will extend over both ends of the case)
B	0.385	2.250	0.406	
C	0.385	2.700	0.406	
D	0.385	3.000	0.406	
E	0.478	1.950	0.500	
F	0.478	2.380	0.500	
G	0.478	3.060	0.500	
H	0.478	3.500	0.500	



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Capacitors for Operation to + 125 °C

Vishay Sprague

POLAR CAPACITORS										
		DC LEAKAGE (µA)			Z	CAPACITANCE CHANGE (%)			DF	RIPPLE CURRENT ⁽¹⁾
CAPACITANCE (µF)	CASE CODE	25 °C	85 °C	125 °C	- 55 °C	25 °C	85 °C	125 °C	(%)	mA
150 V 85 °C WVDC . . . 100 WVDC at + 125 °C										
55	B	2	10	10	48	- 35	6	10	10	1650
200 V 85 °C WVDC . . . 135 WVDC at + 125 °C										
1.5	A	1	2	2	1420	- 16	7	8	3	400
2.3	A	1	2	2	995	- 16	7	8	3	565
11	B	1	9	9	200	- 16	8	8	8	970
21	F	2	17	17	140	- 20	8	8	8.5	1335
43	G	9	36	36	60	- 25	15	15	10	1800
250 V 85 °C WVDC . . . 165 WVDC at + 125 °C										
1.8	A	1	2	2	1200	- 16	7	8	3	520
3.4	B	3	12	12	600	- 14	10	12	6	700
13	B	5	24	24	180	- 18	12	15	7.2	1200
23	F	10	40	40	100	- 26	14	16	8	1500
41	G	12	48	48	64	- 30	15	17	17.4	1900
300 V 85 °C WVDC . . . 200 WVDC at + 125 °C										
1	C	1	2	2	2130	- 16	7	8	2.8	400
13	D	5	24	24	240	- 20	12	15	10	1300
14	H	2	17	17	210	- 20	8	8	8.5	1335

NON-POLAR CAPACITORS										
		DC LEAKAGE (µA)			Z	CAPACITANCE CHANGE (%)			DF	RIPPLE CURRENT ⁽¹⁾
CAPACITANCE (µF)	CASE CODE	25 °C	85 °C	125 °C	- 55 °C	25 °C	85 °C	125 °C	(%)	mA
6 WVDC at 85 °C . . . 4 WVDC at + 125 °C										
410	B	3	14	14	36	- 88	16	20	155	1500
15 WVDC at 85 °C . . . 10 WVDC at + 125 °C										
410	F	6	24	24	44	- 77	20	25	3.6	1800
25 WVDC at 85 °C . . . 15 WVDC at + 125 °C										
34	A	2	9	9	180	- 40	12	15	22	850
135	B	3	16	16	66	- 62	13	16	55	1400
30 WVDC at 85 °C . . . 20 WVDC at + 125 °C										
58	A	1	5	5	60	- 38	8	12	12	1200
235	B	2	10	10	30	- 65	10	18	30	1800

Note

⁽¹⁾ Ripple current is at 40 kHz and is govern by the Ripple Current Multipliers associated with Mil-PRF-39006/22 and Mil-PRF-39006/25. All capacitance, DF and Z measurements are based on 120 Hz frequency and equivalent series circuit measuring equipment settings. Other ratings are available. Contact factory with inquiry.



NON-POLAR CAPACITORS										
		DC LEAKAGE (µA)			Z	CAPACITANCE CHANGE (%)			DF	RIPPLE CURRENT ⁽¹⁾
CAPACITANCE (µF)	CASE CODE	25 °C	85 °C	125 °C	- 55 °C	25 °C	85 °C	125 °C	(%)	mA
50 WVDC at 85 °C . . . 30 WVDC at + 125 °C										
34	A	1	5	5	66	- 25	8	15	7.6	1050
60	B	4	24	24	98	- 42	12	15	23	1200
235	F	3	25	25	20	- 45	8	15	31	2100
340	G	5	40	40	16	- 58	10	20	35	2750
75 WVDC at 85 °C . . . 50 WVDC at + 125 °C										
11	A	3	12	12	314	- 19	10	12	8.5	600
41	B	4	24	24	126	- 30	12	15	15.2	1000
55	G	9	36	36	58	- 35	20	20	12	1850
100 WVDC at 85 °C . . . 65 WVDC at + 125 °C										
5	A	3	12	12	400	- 35	16	20	4.5	800
11	B	1	9	9	200	- 16	8	8	7.5	965
15	F	2	12	12	160	- 16	8	8	7	1240
125 WVDC at 85 °C . . . 87 WVDC at + 125 °C										
1.8	A	1	2	2	1200	- 16	7	8	2.7	520
7	B	1	7	7	334	- 16	7	8	6	860
23.5	F	10	40	40	100	- 26	14	16	7.9	1200
28	G	10	40	40	64	- 25	15	15	6.5	1800
150 WVDC at 85 °C . . . 100 WVDC at + 125 °C										
8.3	E	1	5	5	264	- 25	5	9	10	1050
200 WVDC at 85 °C . . . 150 WVDC at + 125 °C										
1.2	E	1	2	2	2260	- 16	7	8	3	600
250 WVDC at 85 °C . . . 165 WVDC at + 125 °C										
1.7	E	3	12	12	1200	- 14	10	12	6	700

Note

⁽¹⁾ Ripple current is at 40 kHz and is govern by the Ripple Current Multipliers associated with Mil-PRF-39006/22 and Mil-PRF-39006/25. All capacitance, DF and Z measurements are based on 120 Hz frequency and equivalent series circuit measuring equipment settings. Other ratings are available. Contact factory with inquiry.



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