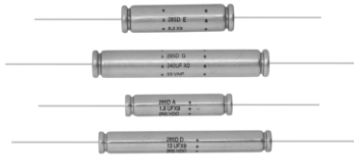


Tantalum-Cased-Tantalum Sintered Anode TANTALEX[®] Capacitors for Operation to + 125 °C



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

FEATURES

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

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

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	POLARITY
MODEL	CAPACITANCE	CAPACITANCE TOLERANCE	DC VOLTAGE RATING AT + 85 °C	CASE CODE	STYLE NUMBER	POLARITY
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	See Ratings and Case Codes Table	0 = No outer tube 2 = Outer polyester-film insulation	P = Polar N = Non Polar	

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											
PART NUMBER	CAP. (µF)	CASE CODE	DC LEAKAGE (µA)			Z	CAPACITANCE CHANGE (%)			DF (%)	RIPPLE CURRENT ⁽¹⁾ (mA)
			25 °C	85 °C	125 °C		- 55 °C	25 °C	85 °C		
150 WVDC at 85 °C. . . 100 WVDC at + 125 °C											
285D556(2)150B(3)P	55	B	2	10	10	48	- 35	6	10	10	1650
200 WVDC at 85 °C. . . 135 WVDC at + 125 °C											
285D155(2)200A(3)P	1.5	A	1	2	2	1420	- 16	7	8	3	400
285D235(2)200A(3)P	2.3	A	1	2	2	995	- 16	7	8	3	565
285D116(2)200B(3)P	11	B	1	9	9	200	- 16	8	8	8	970
285D216(2)200F(3)P	21	F	2	17	17	140	- 20	8	8	8.5	1335
285D436(2)200G(3)P	43	G	9	36	36	60	- 25	15	15	10	1800
250 WVDC at 85 °C. . . 165 WVDC at + 125 °C											
285D185(2)250A(3)P	1.8	A	1	2	2	1200	- 16	7	8	3	520
285D345(2)250B(3)P	3.4	B	3	12	12	600	- 14	10	12	6	700
285D136(2)250B(3)P	13	B	5	24	24	180	- 18	12	15	7.2	1200
285D236(2)250F(3)P	23	F	10	40	40	100	- 26	14	16	8	1500
285D416(2)250G(3)P	41	G	12	48	48	64	- 30	15	17	17.4	1900
300 WVDC at 85 °C. . . 200 WVDC at + 125 °C											
285D105(2)300C(3)P	1	C	1	2	2	2130	- 16	7	8	2.8	400
285D136(2)300D(3)P	13	D	5	24	24	240	- 20	12	15	10	1300
285D146(2)300H(3)P	14	H	2	17	17	210	- 20	8	8	8.5	1335

NON-POLAR CAPACITORS											
PART NUMBER	CAP. (µF)	CASE CODE	DC LEAKAGE (µA)			Z	CAPACITANCE CHANGE (%)			DF (%)	RIPPLE CURRENT ⁽¹⁾ (mA)
			25 °C	85 °C	125 °C		- 55 °C	25 °C	85 °C		
6 WVDC at 85 °C . . . 4 WVDC at + 125 °C											
285D417(2)006B(3)N	410	B	3	14	14	36	- 88	16	20	155	1500
15 WVDC at 85 °C . . . 10 WVDC at + 125 °C											
285D417(2)015F(3)N	410	F	6	24	24	44	- 77	20	25	3.6	1800
25 WVDC at 85 °C . . . 15 WVDC at + 125 °C											
285D346(2)025A(3)N	34	A	2	9	9	180	- 40	12	15	22	850
285D147(2)025B(3)N	135	B	3	16	16	66	- 62	13	16	55	1400
30 WVDC at 85 °C . . . 20 WVDC at + 125 °C											
285D586(2)030A(3)N	58	A	1	5	5	60	- 38	8	12	12	1200
285D247(2)030B(3)N	235	B	2	10	10	30	- 65	10	18	30	1800

Notes

- (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.
- (2) Capacitance tolerance: X0 = 20 %, X9 = 10 %
- (3) Style number or case insulation: 0 = No insulation, 2 = Polyester film insulation

NON-POLAR CAPACITORS												
PART NUMBER	CAP. (µF)	CASE CODE	DC LEAKAGE (µA)			Z - 55 °C	CAPACITANCE CHANGE (%)			DF (%)	RIPPLE CURRENT (1) (mA)	
			25 °C	85 °C	125 °C		25 °C	85 °C	125 °C			
50 WVDC at 85 °C . . . 30 WVDC at + 125 °C												
285D346(2)050A(3)N	34	A	1	5	5	66	- 25	8	15	7.6	1050	
285D606(2)050B(3)N	60	B	4	24	24	98	- 42	12	15	23	1200	
285D247(2)050F(3)N	235	F	3	25	25	20	- 45	8	15	31	2100	
285D347(2)050G(3)N	340	G	5	40	40	16	- 58	10	20	35	2750	
75 WVDC at 85 °C . . . 50 WVDC at + 125 °C												
285D116(2)075A(3)N	11	A	3	12	12	314	- 19	10	12	8.5	600	
285D416(2)075B(3)N	41	B	4	24	24	126	- 30	12	15	15.2	1000	
285D556(2)075G(3)N	55	G	9	36	36	58	- 35	20	20	12	1850	
100 WVDC at 85 °C . . . 65 WVDC at + 125 °C												
285D504(2)100A(3)N	5	A	3	12	12	400	- 35	16	20	4.5	800	
285D116(2)100B(3)N	11	B	1	9	9	200	- 16	8	8	7.5	965	
285D156(2)100F(3)N	15	F	2	12	12	160	- 16	8	8	7	1240	
125 WVDC at 85 °C . . . 87 WVDC at + 125 °C												
285D185(2)125A(3)N	1.8	A	1	2	2	1200	- 16	7	8	2.7	520	
285D705(2)125B(3)N	7	B	1	7	7	334	- 16	7	8	6	860	
285D246(2)125F(3)N	23.5	F	10	40	40	100	- 26	14	16	7.9	1200	
285D286(2)125G(3)N	28	G	10	40	40	64	- 25	15	15	6.5	1800	
150 WVDC at 85 °C . . . 100 WVDC at + 125 °C												
285D835(2)150E(3)N	8.3	E	1	5	5	264	- 25	5	9	10	1050	
200 WVDC at 85 °C . . . 150 WVDC at + 125 °C												
285D125(2)200E(3)N	1.2	E	1	2	2	2260	- 16	7	8	3	600	
250 WVDC at 85 °C . . . 165 WVDC at + 125 °C												
285D175(2)250E(3)N	1.7	E	3	12	12	1200	- 14	10	12	6	700	

Notes

- (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.
- (2) Capacitance tolerance: X0 = 20 %, X9 = 10 %
- (3) Style number or case insulation: 0 = No insulation, 2 = Polyester film insulation



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