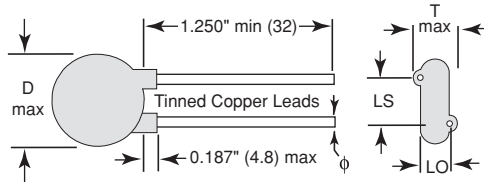




# High Voltage Disc Capacitors

Radial Lead Style - 2000 to 15,000 VDC  
 Axial Lead Style - 10,000 to 30,000 VDC



φ - 20 AWG .032" (.81) except per Note 1.  
 LO ~ (Thk - .100") except per Note 1.

**Note 1**

#22 AWG .025" (.64) wire leads used on:  
 20GAP10 (LO = .07")  
 30GASS20 (LO = .08")  
 30GASS33 (LO = .10")

Vishay Cera-Mite High Voltage Capacitors are the choice of discriminating designers throughout the world. Our reputation for product quality and reliability is a result of continuous research in fine electrical ceramics, high temperature coatings, process controls and rigorous production testing.

The 2 and 3 kV parts are widely used in demanding applications such as snubbers, EMI/RFI filters, and switching power supplies. High voltage capacitors are also specified in lower voltage applications to withstand transient voltage and energy surges in accordance with FCC and IEEE standards.

**APPLICATIONS:**

- Lighting Ballasts
- Telecommunications
- Power Supplies

**2000 VOLT, 10% AND 20% TOLERANCE**

- Application Range: Up to 2500 VDC, 600 VRMS
- Insulation Resistance: 10,000 MΩ minimum
- Dissipation Factor: 2.0% maximum

**564C Series**

- Dielectric Strength: 3500 VDC, 1000 VRMS

VALUE pF	TOL.	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
			DIA.	THK.	L.S.	
100	K	20TST10	.330	.190	.250	X7R
220	K	20TST22	.330	.180	.250	X7R
330	K	20TST33	.330	.180	.250	X7R
470	K	20TST47	.330	.170	.250	X7R
560	K	20TST56	.330	.185	.250	X7R
680	K	20TST68	.330	.170	.250	X7R
1000	M	20GAD10	.330	.170	.250	Y5U
1000	M	20TSSD10	.330	.175	.250	Y5S
1000	K	20TSD10	.400	.175	.250	X7R
1500	M	20GAD15	.330	.170	.250	Y5U
1500	M	20TSSD15	.400	.170	.250	Y5S
1500	K	20TSD15	.430	.160	.250	X7R

VALUE pF	TOL.	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
			DIA.	THK.	L.S.	
1800	M	20GAD18	.360	.170	.250	Z5U
1800	M	20TSSD18	.430	.170	.250	Y5S
1800	K	20TSD18	.460	.170	.250	X7R
2200	M	20GAD22	.400	.175	.250	Z5U
2200	M	20TSSD22	.460	.170	.250	Y5S
2200	K	20TSD22	.460	.170	.250	X7R
2700	M	20GAD27	.430	.175	.250	Z5U
2700	M	20TSSD27	.530	.175	.250	Y5S
2700	K	20TSD27	.530	.170	.250	X7R
3300	M	20GAD33	.430	.175	.250	Z5U
3300	M	20TSSD33	.530	.175	.250	Y5S
3300	K	20TSD33	.530	.160	.250	X7R

VALUE pF	TOL.	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
			DIA.	THK.	L.S.	
3900	M	20GAD39	.490	.175	.250	Z5U
3900	M	20TSSD39	.620	.175	.250	Y5S
3900	K	20TSD39	.680	.170	.250	X7R
4700	M	20GAD47	.490	.170	.250	Z5U
4700	M	20TSSD47	.680	.175	.375	Y5S
4700	K	20TSD47	.680	.170	.375	X7R
5600	M	20TSSD56	.680	.170	.375	Y5S
6800	M	20GAD68	.560	.170	.375	Z5U
6800	M	20TSSD68	.720	.170	.375	Y5S
.01uF	M	20GAS10	.680	.170	.375	Z5U
.01uF	M	20GASS10	.620	.170	.375	Y5V
.10uF	M	20GAP10	.950	.240	.375	Y5V

**3000 VOLT, 10% AND 20% TOLERANCE**

- Application Range: Up to 4000 VDC, 1000 VRMS
- Insulation Resistance: 50,000 MΩ minimum
- Dissipation Factor: 2.0% maximum

**564C Series**

- Dielectric Strength: 5250 VDC, 1500 VRMS

VALUE pF	TOL.	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
			DIA.	THK.	L.S.	
10	M	30GAQ10	.330	.210	.250	U2J
12	M	30GAQ12	.330	.205	.250	U2J
15	M	30GAQ15	.330	.180	.250	U2J
22	M	30GAQ22	.330	.200	.250	R3L
27	M	30GAQ27	.330	.190	.250	R3L
33	M	30GAQ33	.330	.170	.250	R3L
47	M	30GAQ47	.330	.230	.250	X7R
56	M	30GAQ56	.330	.190	.250	X7R
68	M	30GAQ68	.330	.200	.250	X7R
100	M	30GAT10	.330	.180	.250	X7R
150	M	30GAT15	.330	.190	.250	X7R
220	M	30GAT22	.330	.175	.250	X7R
270	M	30GAT27	.330	.180	.250	X7R
330	M	30GAT33	.330	.175	.250	X7R
390	M	30GAT39	.330	.175	.250	X7R
470	M	30GAT47	.330	.175	.250	X7R
680	M	30GAT68	.330	.175	.250	Y5U

VALUE pF	TOL.	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
			DIA.	THK.	L.S.	
680	K	30TST68	.330	.180	.250	X7R
1000	M	30GAD10	.330	.195	.250	Z5U
1000	M	30TSSD10	.400	.190	.250	Y5S
1000	K	30TSD10	.400	.175	.250	X7R
1500	M	30GAD15	.360	.190	.250	Z5U
1500	M	30TSSD15	.460	.190	.250	Y5S
1500	K	30TSD15	.490	.185	.250	X7R
1800	M	30GAD18	.400	.190	.250	Z5U
1800	M	30TSSD18	.490	.190	.250	Y5S
1800	K	30TSD18	.530	.185	.250	X7R
2200	M	30GAD22	.430	.190	.250	Z5U
2200	M	30TSSD22	.530	.190	.250	Y5S
2200	K	30TSD22	.530	.180	.250	X7R
2700	M	30GAD27	.460	.200	.250	Z5U
2700	M	30TSSD27	.560	.185	.250	Y5S
2700	K	30TSD27	.620	.185	.250	X7R
3300	M	30GAD33	.490	.185	.250	Z5U

VALUE pF	TOL.	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
			DIA.	THK.	L.S.	
3300	M	30TSSD33	.620	.185	.375	Y5S
3300	K	30TSD33	.620	.170	.375	X7R
3900	M	30GAD39	.530	.185	.375	Z5U
3900	M	30TSSD39	.680	.185	.375	Y5S
3900	K	30TSD39	.720	.185	.375	X7R
4700	M	30GAD47	.620	.195	.375	Z5U
4700	M	30TSSD47	.680	.185	.375	Y5S
4700	K	30TSD47	.720	.175	.375	X7R
5600	M	30TSSD56	.790	.190	.375	Y5S
6800	M	30GAD68	.680	.185	.375	Z5U
6800	M	30TSSD68	.900	.205	.375	Y5S
6800	K	30TSD68	.900	.185	.375	X7R
8200	M	30GAD82	.680	.185	.375	Z5U
.01uF	M	30GAS10	.790	.185	.375	Z5U
.01uF	M	30GASS10	.720	.185	.375	Y5V
.02uF	M	30GASS20	.720	.240	.375	Z5U
.033uF	M	30GASS33	.900	.240	.375	Z5U

**6000 VOLT, 20% TOLERANCE**

- Application Range: Up to 6000 VDC, 1500 VRMS
- Insulation Resistance: 75,000 MΩ minimum
- Dissipation Factor: 2.0% maximum

**564C Series**

- Dielectric Strength: 10,500 VDC, 3000 VRMS

VALUE pF	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
		DIA.	THK.	L.S.	
10	60GAQ10	.400	.220	.375	NP0
22	60GAQ22	.460	.240	.375	U2J
33	60GAQ33	.400	.230	.375	R3L
47	60GAQ47	.460	.205	.375	R3L
100	60GAT10	.400	.240	.375	X5F

VALUE pF	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
		DIA.	THK.	L.S.	
220	60GAT22	.400	.265	.375	X5F
330	60GAT33	.400	.260	.375	X5S
470	60GAT47	.400	.265	.375	Y5U
560	60GAT56	.400	.240	.375	Y5U
1000	60GAD10	.400	.270	.375	Z5U

VALUE pF	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
		DIA.	THK.	L.S.	
1500	60GAD15	.460	.280	.375	Z5U
2200	60GAD22	.530	.240	.375	Z5U
3300	60GAD33	.620	.260	.375	Z5U
4700	60GAD47	.790	.260	.375	Z5U
.01uF	60GAS10	.950	.250	.375	Z5U

# 20GA, 20TS, 30GA, 30TS, 60GA Series



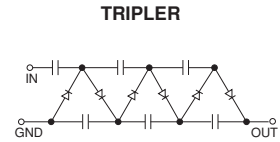
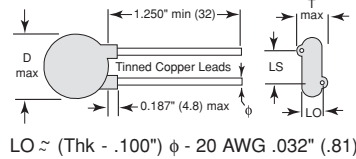
Vishay Cera-Mite

## High Voltage Disc Capacitors

Radial Lead Style - 2000 to 15,000 VDC  
Axial Lead Style - 10,000 to 30,000 VDC

### HIGH VOLTAGE APPLICATIONS:

- Televisions, Monitors and Oscilloscopes
- High Voltage Power Supplies and Lasers
- Electronic Air Cleaners
- X-Ray Equipment



564C Series

### 7500 VDC, 2000 VRMS, 60 HZ

VALUE pF	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
		DIA.	THK.	L.S.	
100	75GAT10	.530	.310	.500	X5F
470	75GAT47	.620	.270	.500	X5F
1000	75GAD10	.620	.320	.500	Y5U
2500	75GAD25	.620	.280	.500	Z5U

### 10,000 VDC, 3000 VRMS, 60 HZ

VALUE pF	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
		DIA.	THK.	L.S.	
100	100GAT10	.680	.370	.500	X5F
100	100GAST10	.490	.330	.375	Y5R
250	100GAT25	.680	.300	.500	X5F
250	100GATT25	.490	.290	.375	N4700
250	100GAST25	.490	.340	.375	Y5R
500	100GAT50	.680	.345	.500	X5F
500	100GATT50	.680	.320	.500	N4700
500	100GAST50	.490	.310	.375	Y5R

615C Series

VALUE pF	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
		DIA.	THK.	L.S.	
680	100GATT68	.750	.300	.500	N4700
820	100GATT82	.810	.300	.500	N4700
1000	100GAD10	.750	.320	.500	Y5R
1000	100GATD10	.980	.320	.500	N4700
1000	100GASD10	.680	.330	.500	Y5U
2500	100GAD25	.750	.350	.500	Z5U
2500	100GATD25	.980	.330	.500	Y5R
3000	100GAD33	.980	.390	.500	Z5U

### 15,000 VDC, 4500 VRMS, 60 HZ

VALUE pF	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
		DIA.	THK.	L.S.	
100	150GAST10	.490	.490	.500	Y5R
100	150GAT10	.670	.430	.750	X5F
100	150GATT10	.490	.470	.500	N4700
250	150GAST25	.490	.480	.500	Y5R
250	150GAT25	.670	.455	.750	X5F

VALUE pF	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
		DIA.	THK.	L.S.	
250	150GATT25	.670	.430	.750	N4700
390	150GATT39	.750	.425	.750	N4700
500	150GAST50	.490	.375	.500	Y5U
500	150GAT50	.670	.430	.750	Y5R
500	150GATT50	.810	.410	.750	N4700

615C Series

VALUE pF	CATALOG NUMBER	MECHANICAL (in)			TEMP. CHAR.
		DIA.	THK.	L.S.	
750	150GATT75	.980	.350	.750	N4700
1000	150GAD10	.670	.420	.750	Y5U
1000	150GATD10	.980	.460	.750	Y5R
2200	150GAD22	.980	.510	.750	Z5U
2500	150GAD25	1.150	.450	.750	Z5U

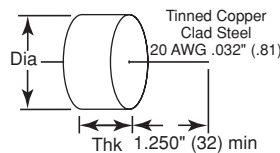
### PERFORMANCE DATA - 7500 TO 15KV SERIES

- **Operating Temperature:** -25° to +105°C
- **Capacitance Tolerance:** ±20% (X5F, Y5R, N4700); + 80/- 20% (Y5U, Z5U).
- **Dissipation Factor:** 0.2%, (N4700); 1.5 & 2.0% (X5F, Y5U, Y5R, Z5U).
- **Dielectric Strength:** 150% of VDC (dielectric fluid), charging current limit to 50 mA max.
- **Insulation Resistance:** 200,000 MΩ minimum @ 180 VDC, 1000 ΩF.
- **Corona:** 100 picocoulombs at rated AC voltage.
- **Power Dissipation:** Limit to 25°C case rise above ambient, 105°C max.
- **Peak Current:** dv/dt limit approx. 2000 V/μs. Application to be tested and confirmed by user.

## Axial Leaded High Voltage Capacitors, Molded Case, High Temperature, Epoxy Construction

### FEATURES

- Greater lead-to-lead arcing distance, without costly encapsulation.
- Longer life at elevated temperatures (up to 125°C); extended thermal cycling.
- Low corona (10 picocoulombs) at rated AC voltage.



### 600C Series SIZE CODES-AXIAL LEADED

DIA	in / mm	THK	in / mm
A	0.83 (21)	1	0.50 (13)
C	1.18 (30)	2	0.60 (15)
D	1.45 (37)	3	0.80 (20)
		4	0.95 (24)

### 10,000 VDC/3,000 V<sub>rms</sub>

VALUE pF	TOL.	CATALOG NUMBER	SIZE CODE	TEMP. COEF.
470	M	10AZT47	A1	N4700
1000	M	10AZD10	C1	N4700
1500	Z	10AED15	A1	Z5U
2000	M	10AZD20	D1	N4700
2200	Z	10AED22	A1	Z5U
3300	Z	10AED33	C1	Z5U
3300	M	10ACD33	C2	X7R
4700	Z	10AED47	C1	Z5U
4700	M	10ACD47	D2	X7R
6800	Z	10AED68	C1	Z5U
10000	Z	10AES10	D1	Z5U

### 15,000 VDC/5,000 V<sub>rms</sub>

VALUE pF	TOL.	CATALOG NUMBER	SIZE CODE	TEMP. COEF.
390	M	15AZT39	A1	N4700
820	M	15AZT82	C1	N4700
1000	Z	15AED10	A1	Z5U
1500	Z	15AED15	A1	Z5U
1500	M	15ACD15	C2	X7R
1500	M	15AZD15	D1	N4700
2200	Z	15AED22	C1	Z5U
2200	M	15ACD22	C1	X7R
3300	Z	15AED33	C1	Z5U
3300	M	15ACD33	D2	X7R
3900	M	15ACD39	D2	X7R
4700	Z	15AED47	C1	Z5U
6800	Z	15AED68	D1	Z5U

### 20,000 VDC/6,000 V<sub>rms</sub>

VALUE pF	TOL.	CATALOG NUMBER	SIZE CODE	TEMP. COEF.
220	M	20AZT22	A2	N4700
680	Z	20AET68	A2	Z5U
680	M	20AZT68	C2	N4700
1000	Z	20AED10	A2	Z5U
1000	M	20ACD10	C3	X7R
1000	M	20AZD10	D2	N4700
1500	Z	20AED15	A2	Z5U
1500	M	20ACD15	C3	X7R
2200	Z	20AED22	C2	Z5U
2200	M	20ACD22	D3	X7R
2500	M	20ACD25	D3	X7R
2700	M	20ACD27	D3	X7R
3300	Z	20AED33	C2	Z5U
4700	Z	20AED47	D2	Z5U
5000	Z	20AED50	D2	Z5U

### 30,000 VDC/10,000 V<sub>rms</sub>

VALUE pF	TOL.	CATALOG NUMBER	SIZE CODE	TEMP. COEF.
180	M	30AZT18	A3	N4700
330	M	30ACT33	A4	X7R
470	M	30AZT47	C3	N4700
470	Z	30AET47	A3	Z5U
680	M	30AZT68	D3	N4700
680	Z	30AET68	A3	Z5U
820	Z	30AET82	A3	Z5U
1000	M	30ACD10	C4	X7R
1000	Z	30AED10	C3	Z5U
1200	Z	30AED12	C3	Z5U
1500	M	30ACD15	D4	X7R
1500	Z	30AED15	C3	Z5U
1800	Z	30AED18	D3	Z5U
2000	Z	30AED20	D3	Z5U
2200	Z	30AED22	D3	Z5U
2500	Z	30AED25	D3	Z5U
3000	Z	30AED30	D3	Z5U
3300	Z	30AED33	D3	Z5U

### SPECIFICATIONS:

- **Application Range:** Up to 30,000 VDC, 10,000Vrms
- **Dielectric Strength:** 150% of rated voltage (in dielectric fluid) charging current limited to 50mA.
- **Temperature Characteristics:** N4700 (T3M), X7R, Z5U
- **Insulation Resistance:** 200,000 MΩ, minimum @ 180 VDC, 1000 ΩF.
- **Dissipation Factor:** 0.2% (N4700); 2% max (X7R, Z5U).