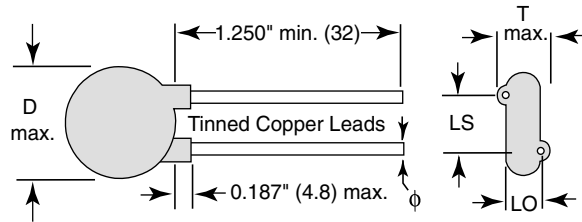


High Voltage Ceramic Disc Capacitors 2 kVDC to 7.5 kVDC

Fig. 1


LEAD OFFSET 'LO'	
NOMINAL	~ Thickness - 0.100"
EXCEPTION	0.07 (1.8 mm) - 565R20GAP10
	0.08 (2.0 mm) - 565R30GASS20
	0.10 (2.54 mm) - 565R30GASS33

INSULATION RESISTANCE:

2 kVDC	min. 10 000 MΩ
3 kVDC	min. 50 000 MΩ
6 kVDC	min. 75 000 MΩ
7.5 kVDC	min. 200 000 MΩ

TOLERANCE ON CAPACITANCE:

± 10 %; ± 20 %, + 80 - 20 %

DISSIPATION FACTOR:

 0.2 % max. at 1 MHz; 1 V
 2.0 % max. at 1 kHz; 1 V

CATEGORY TEMPERATURE RANGE:

(- 25 to + 85) °C

CLIMATIC CATEGORY ACC. TO EN60068-1:

25/085/21

OPERATING TEMPERATURE RANGE:

(- 25 to + 105) °C

FEATURES

- Low losses
- High capacitance in small size
- High stability


**RoHS
COMPLIANT**
APPLICATIONS

- Lighting Ballasts
- SMPS
- DC and Pulse High voltage

DESIGN

The capacitors consist of a ceramic disc of which both sides are silver-plated. Connection leads are made of tinned copper having diameters of 0.025" (0.64 mm) or 0.032" (0.81 mm).

The capacitors may be supplied with straight leads having lead spacing of 0.250" (6.35 mm), 0.375" (9.5 mm) or 0.500" (12.7 mm).

The standard tolerances are ± 10 % or ± 20 %.

Coating is made of resin coating or flame retardant epoxy resin in accordance with "UL94V-0".

CAPACITANCE RANGE:

10 pF to 0.10 μF

RATED VOLTAGE:

 2 kVDC
 3 kVDC
 6 kVDC
 7.5 kVDC

DIELECTRIC STRENGTH BETWEEN LEADS:

Component test:

2 kVDC	3500 VDC, 2 s
3 kVDC	5000 VDC, 2 s
6 kVDC	10 500 VDC, 2 s
7.5 kVDC	11 250 VDC, 2 s

CERAMIC DIELECTRIC:

 C0G, U2J, R3L (Class 1)
 X7R, X5F, X5S, Y5S, Y5U, Y5V, Z5U (Class 2)

564R & 565R Series



Vishay Cera-Mite

High Voltage Ceramic Disc Capacitors
2 kVDC to 7.5 kVDC

ORDERING INFORMATION, CERAMIC 2 kVDC							
C (pF)	TOL. (%)	D DIAMETER INCH (mm)	T THICKNESS INCH (mm)	LS LEAD SPACE INCH (mm)	WIRE SIZE		ORDERING CODE
					AWG	INCH (mm)	
X7R							
100	± 10 %	0.330 (8.4)	0.190 (4.8)	0.250 (6.4)	20	0.032 (0.81)	564R20TST10
220			0.180 (4.6)				564R20TST22
330			0.170 (4.3)				564R20TST33
470			0.185 (4.7)				564R20TST47
560			0.170 (4.3)				564R20TST68
680			0.400 (10.2)				0.175 (4.4)
1000		0.430 (10.9)	0.160 (4.1)	564R20TSD15			
1500		0.460 (11.7)	0.170 (4.3)	564R20TSD18			
1800		0.530 (13.5)	0.170 (4.3)	564R20TSD22			
2200			0.160 (4.1)	564R20TSD27			
2700			0.170 (4.3)	564R20TSD33			
3300		0.680 (17.3)	0.170 (4.3)	564R20TSD39			
3900				0.375 (9.5)			564R20TSD47
4700							
Y5S							
1000	± 20 %	0.330 (8.4)	0.175 (4.4)	0.250 (6.4)	20	0.032 (0.81)	564R20TSSD10
1500		0.400 (10.2)	0.170 (4.3)				564R20TSSD15
1800		0.430 (10.9)					564R20TSSD18
2200		0.460 (11.7)					564R20TSSD22
2700		0.530 (13.5)	0.175 (4.4)				564R20TSSD27
3300				564R20TSSD33			
3900				564R20TSSD39			
4700		0.620 (15.7)	0.170 (4.3)	564R20TSSD47			
5600		0.680 (17.3)		564R20TSSD56			
6800		0.720 (18.3)		564R20TSSD68			
Y5U							
1000	± 20 %	0.330 (8.4)	0.170 (4.3)	0.250 (6.4)	20	0.032 (0.81)	564R20GAD10
1500		0.330 (8.4)	0.170 (4.3)				564R20GAD15
Z5U							
1800	± 20 %	0.360 (9.1)	0.170 (4.3)	0.250 (6.4)	20	0.032 (0.81)	564R20GAD18
2200		0.400 (10.2)	0.175 (4.4)				564R20GAD22
2700		0.430 (10.9)					564R20GAD27
3300		0.490 (12.4)					564R20GAD33
3900		0.560 (14.2)	0.170 (4.3)	564R20GAD39			
4700				564R20GAD47			
6800				564R20GAD68			
0.010 μF		0.680 (17.3)		0.375 (9.5)			564R20GAS10
Y5V							
0.010 μF	± 20 %	0.620 (15.7)	0.170 (4.3)	0.375 (9.5)	20	0.032 (0.81)	564R20GASS10
0.10 μF		0.950 (24.1)	0.240 (6.1)		22	0.025 (0.64)	565R20GAP10

TAPE AND REEL OPTIONS

To specify tape and reel, add two letter suffix to the ordering code (Details of the packaging code see general section of the catalog)



ORDERING INFORMATION, CERAMIC 3 kVDC											
C (pF)	TOL. (%)	D DIAMETER INCH (mm)	T THICKNESS INCH (mm)	LS LEAD SPACE INCH (mm)	WIRE SIZE		ORDERING CODE				
					AWG	INCH (mm)					
U2J (N750)											
10	± 20 %	0.330 (8.4)	0.210 (5.3)	0.250 (6.4)	20	0.032 (0.81)	564R30GAQ10				
12			0.210 (5.3)				564R30GAQ12				
15			0.180 (4.6)				564R30GAQ15				
R3L (N2200)											
22	± 20 %	0.330 (8.4)	0.200 (5.1)	0.250 (6.4)	20	0.032 (0.81)	564R30GAQ22				
27			0.190 (4.8)				564R30GAQ27				
33			0.170 (4.3)				564R30GAQ33				
X7R											
47	± 20 %	0.330 (8.4)	0.230 (5.8)	0.250 (6.4)	20	0.032 (0.81)	564R30GAQ47				
56			0.190 (4.8)				564R30GAQ56				
68			0.200 (5.1)				564R30GAQ68				
100			0.180 (4.6)				564R30GAT10				
150			0.190 (4.8)				564R30GAT15				
220			0.175 (4.4)				564R30GAT22				
270			0.180 (4.6)				564R30GAT27				
330			0.175 (4.4)				0.330 (8.4)	0.250 (6.4)	20	0.032 (0.81)	564R30GAT33
390											564R30GAT39
470											564R30GAT47
680	564R30TST68										
1000	± 10 %	0.400 (10.2)	0.175 (4.4)	0.375 (9.5)			564R30TSD10				
1500		0.490 (12.5)	0.185 (4.7)				564R30TSD15				
1800		0.530 (13.5)	0.180 (4.6)				564R30TSD18				
2200			0.185 (4.7)				564R30TSD22				
2700		0.620 (15.7)	0.185 (4.7)				564R30TSD27				
3300			0.170 (4.3)				564R30TSD33				
3900		0.720 (18.3)	0.330 (8.4)				0.250 (6.4)	20	0.032 (0.81)	564R30TSD39	
4700										0.175 (4.4)	564R30TSD47
6800										0.185 (4.7)	564R30TSD68
Y5S											
1000	± 20 %	0.400 (10.2)	0.190 (4.8)	0.250 (6.4)	20	0.032 (0.81)	564R30TSSD10				
1500		0.460 (11.7)					564R30TSSD15				
1800		0.490 (12.4)					564R30TSSD18				
2200		0.530 (13.5)					564R30TSSD22				
2700		0.560 (14.2)					564R30TSSD27				
3300		0.620 (15.7)	0.185 (4.7)	0.375 (9.5)	564R30TSSD33						
3900					564R30TSSD39						
4700		0.680 (17.3)	564R30TSSD47								
5600		0.790 (20.0)	0.190 (4.8)	564R30TSSD56							
6800		0.900 (22.9)	0.205 (5.2)	564R30TSSD68							
Y5U											
680	± 20 %	0.330 (8.4)	0.175 (4.4)	0.250 (6.4)	20	0.032 (0.81)	564R30GAT68				
Z5U											
1000	± 20 %	0.330 (8.4)	0.195 (5.0)	0.250 (6.4)	20	0.032 (0.81)	564R30GAD10				
1500		0.360 (9.1)	0.190 (4.8)				564R30GAD15				
1800		0.400 (10.2)					564R30GAD18				
2200		0.430 (10.9)					564R30GAD22				
2700		0.460 (11.7)					0.200 (5.1)	564R30GAD27			
3300		0.490 (12.4)	0.185 (4.7)	564R30GAD33							
3900		0.530 (13.5)		564R30GAD39							
4700		0.620 (15.7)	0.195 (5.0)	564R30GAD47							
6800		0.680 (17.3)	0.330 (8.4)	0.250 (6.4)	20	0.032 (0.81)	564R30GAD68				
8200							0.185 (4.7)	564R30GAD82			
0.010 μF							0.790 (20.0)	0.240 (6.1)	564R30GAS10		
0.020 μF		0.720 (18.3)	22	0.025 (0.64)	565R30GASS20						
0.033 μF		0.900 (22.9)	22	0.025 (0.64)	565R30GASS33						
Y5V											
0.010 μF		± 20 %	0.720 (18.3)	0.185 (4.7)	0.375 (9.5)	20	0.032 (0.81)	564R30GASS10			

TAPE AND REEL OPTIONS

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564R & 565R Series



Vishay Cera-Mite

High Voltage Ceramic Disc Capacitors
2 kVDC to 7.5 kVDC

ORDERING INFORMATION, CERAMIC 6 kVDC							
C (pF)	TOL. (%)	D DIAMETER INCH (mm)	T THICKNESS INCH (mm)	LS LEAD SPACE INCH (mm)	WIRE SIZE		ORDERING CODE
					AWG	INCH (mm)	
COG (NP0)							
10	± 20 %	0.400 (10.2)	0.220 (5.6)	0.375 (9.5)	20	0.032 (0.81)	564R60GAQ10
U2J (N750)							
22	± 20 %	0.460 (11.7)	0.240 (6.1)	0.375 (9.5)	20	0.032 (0.81)	564R60GAQ22
R3L (N2200)							
33	± 20 %	0.400 (10.2)	0.230 (5.8)	0.375 (9.5)	20	0.032 (0.81)	564R60GAQ33
47		0.460 (11.7)	0.205 (5.2)				564R60GAQ47
X5F							
100	± 20 %	0.400 (10.2)	0.240 (6.1)	0.375 (9.5)	20	0.032 (0.81)	564R60GAT10
220			0.265 (6.7)				564R60GAT22
X5S							
330	± 20 %	0.400 (10.2)	0.260 (6.6)	0.375 (9.5)	20	0.032 (0.81)	564R60GAT33
Y5U							
470	± 20 %	0.400 (10.2)	0.265 (6.7)	0.375 (9.5)	20	0.032 (0.81)	564R60GAT47
560			0.240 (6.1)				564R60GAT56
Z5U							
1000	± 20 %	0.400 (10.2)	0.270 (6.9)	0.375 (9.5)	20	0.032 (0.81)	564R60GAD10
1500		0.460 (11.7)	0.280 (7.1)				564R60GAD15
2200		0.530 (13.5)	0.240 (6.1)				564R60GAD22
3300		0.620 (15.7)	0.260 (6.6)				564R60GAD33
4700		0.790 (20.0)					564R60GAD47
0.010 μF		0.950 (24.1)	0.250 (6.4)				564R60GAS10

ORDERING INFORMATION, CERAMIC 7.5 kVDC							
C (pF)	TOL. (%)	D DIAMETER INCH (mm)	T THICKNESS INCH (mm)	LS LEAD SPACE INCH (mm)	WIRE SIZE		ORDERING CODE
					AWG	INCH (mm)	
X5F							
100	± 20 %	0.530 (13.5)	0.310 (7.9)	0.500 (12.7)	20	0.032 (0.81)	564R75GAT10
470		0.620 (15.7)	0.270 (6.9)				564R75GAT47
Y5U							
1000	+ 80/- 20 %	0.620 (15.7)	0.320 (8.1)	0.500 (12.7)	20	0.032 (0.81)	564R75GAD10
Z5U							
2500	+ 80/- 20 %	0.620 (15.7)	0.280 (7.1)	0.500 (12.7)	20	0.032 (0.81)	564R75GAD25



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