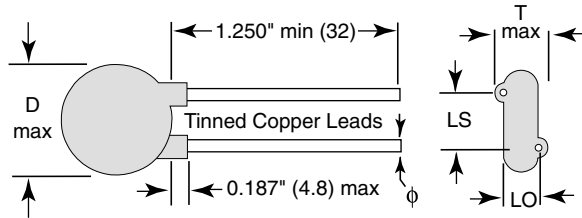


## High Voltage Ceramic Disc Capacitors 2 kVDC to 7.5 kVDC

**Fig. 1**


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

**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	5250 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)	
<b>X7R</b>							
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			564R20TST33				
470			0.170 (4.3)				564R20TST47
560			0.185 (4.7)				564R20TST56
680			0.170 (4.3)				564R20TST68
1000		0.400 (10.2)	0.175 (4.4)				564R20TSD10
1500		0.430 (10.9)	0.160 (4.1)				564R20TSD15
1800		0.460 (11.7)	0.170 (4.3)				564R20TSD18
2200							564R20TSD22
2700							564R20TSD27
3300		0.530 (13.5)	0.170 (4.3)				564R20TSD33
3900			0.160 (4.1)				564R20TSD39
4700		0.680 (17.3)	0.170 (4.3)				564R20TSD47
							0.375 (9.5)
<b>Y5S</b>							
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
<b>Y5U</b>							
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
<b>Z5U</b>							
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							564R20GAD33
3900		0.490 (12.4)	0.175 (4.4)				564R20GAD39
4700							564R20GAD47
6800		0.560 (14.2)	0.170 (4.3)				564R20GAD68
0.010 μF		0.680 (17.3)					0.375 (9.5)
<b>Y5V</b>							
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 & REEL OPTIONS

To specify T & R, 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)		
<b>U2J (N750)</b>								
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	
<b>R3L (N2200)</b>								
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	
<b>X7R</b>								
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)				564R30GAT33	
390			0.175 (4.4)				564R30GAT39	
470			0.180 (4.6)				564R30GAT47	
680	± 10 %	0.400 (10.2)	0.180 (4.6)	0.375 (9.5)	20	0.032 (0.81)	564R30TST68	
1000			0.175 (4.4)				564R30TSD10	
1500			0.490 (12.5)				564R30TSD15	
1800			0.185 (4.7)				564R30TSD18	
2200			0.530 (13.5)				564R30TSD22	
2700		0.180 (4.6)	564R30TSD27					
3300		0.185 (4.7)	564R30TSD33					
3900		0.170 (4.3)	564R30TSD39					
4700		0.720 (18.3)	564R30TSD47					
6800		0.175 (4.4)	564R30TSD68					
<b>Y5S</b>								
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)	564R30TSSD33				
3900		0.680 (17.3)	0.375 (9.5)	564R30TSSD39				
4700		0.680 (17.3)	0.375 (9.5)	564R30TSSD47				
5600		0.790 (20.0)	0.190 (4.8)	564R30TSSD56				
6800		0.900 (22.9)	0.205 (5.2)	564R30TSSD68				
<b>Y5U</b>								
680	± 20 %	0.330 (8.4)	0.175 (4.4)	0.250 (6.4)	20	0.032 (0.81)	564R30GAT68	
<b>Z5U</b>								
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)	564R30GAD15					
1800		0.400 (10.2)	0.190 (4.8)				564R30GAD18	
2200		0.430 (10.9)	0.200 (5.1)				564R30GAD22	
2700		0.460 (11.7)	0.185 (4.7)				564R30GAD27	
3300		0.490 (12.4)	0.195 (5.0)	564R30GAD33				
3900		0.530 (13.5)	0.185 (4.7)	564R30GAD39				
4700		0.620 (15.7)	0.195 (5.0)	564R30GAD47				
6800		0.680 (17.3)	0.185 (4.7)	564R30GAD68				
8200		0.680 (17.3)	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		
<b>Y5V</b>								
0.010 μF		± 20 %	0.720 (18.3)	0.185 (4.7)	0.375 (9.5)	20	0.032 (0.81)	564R30GASS10

**TAPE & 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)	
<b>COG (NP0)</b>							
10	± 20 %	0.400 (10.2)	0.220 (5.6)	0.375 (9.5)	20	0.032 (0.81)	564R60GAQ10
<b>U2J (N750)</b>							
22	± 20 %	0.460 (11.7)	0.240 (6.1)	0.375 (9.5)	20	0.032 (0.81)	564R60GAQ22
<b>R3L (N2200)</b>							
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
<b>X5F</b>							
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
<b>X5S</b>							
330	± 20 %	0.400 (10.2)	0.260 (6.6)	0.375 (9.5)	20	0.032 (0.81)	564R60GAT33
<b>Y5U</b>							
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
<b>Z5U</b>							
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)	
<b>X5F</b>							
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
<b>Y5U</b>							
1000	+ 80/- 20 %	0.620 (15.7)	0.320 (8.1)	0.500 (12.7)	20	0.032 (0.81)	564R75GAD10
<b>Z5U</b>							
2500	+ 80/- 20 %	0.620 (15.7)	0.280 (7.1)	0.500 (12.7)	20	0.032 (0.81)	564R75GAD25

## TAPE & REEL OPTIONS

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