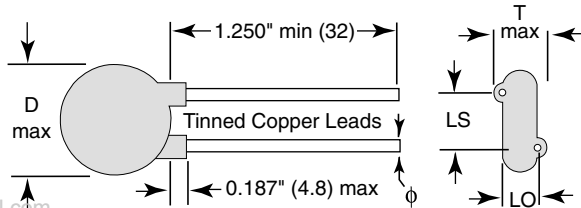


## High Voltage Ceramic Disc Capacitors 2 kVDC to 7.5 kVDC

**Fig. 1**


www.DataSheet4U.com

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 M $\Omega$
3 kVDC	min. 50 000 M $\Omega$
6 kVDC	min. 75 000 M $\Omega$
7.5 kVDC	min. 200 000 M $\Omega$

**TOLERANCE ON CAPACITANCE:**
 $\pm 10\%$ ;  $\pm 20\%$ , + 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  $\pm 10\%$  or  $\pm 20\%$ .

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

**CAPACITANCE RANGE:**

 10 pF to 0.10  $\mu$ F

**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)	0.160 (4.1)				564R20TSD33				
3900							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							564R20TSSD56				
6800		0.720 (18.3)	0.170 (4.3)				564R20TSSD68				
			0.375 (9.5)								
<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)	0.170 (4.3)				564R20GAD39				
4700							564R20GAD47				
6800		0.560 (14.2)	0.170 (4.3)				564R20GAD68				
0.010 μF		0.680 (17.3)					0.375 (9.5)	564R20GAS10			
<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)				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)	0.170 (4.3)				564R30TSD27				
3300			0.185 (4.7)				564R30TSD33				
3900		0.720 (18.3)	0.185 (4.7)				0.375 (9.5)	564R30TSD39			
4700			0.175 (4.4)				564R30TSD47				
6800			0.185 (4.7)				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)	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							
<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)	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)	0.375 (9.5)	564R30GAD47						
6800		0.680 (17.3)	0.185 (4.7)		564R30GAD68						
8200					564R30GAD82						
0.010 μF		0.790 (20.0)	0.240 (6.1)		22	0.025 (0.64)	565R30GASS20				
0.020 μF		0.720 (18.3)			22	0.025 (0.64)	565R30GASS33				
0.033 μF		0.900 (22.9)									
<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**

To specify T & R, add two letter suffix to the ordering code (Details of the packaging code see general section of the catalog)

# 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

To specify T & R, add two letter suffix to the ordering code (Details of the packaging code see general section of the catalog)



## Notice

Specifications of the products displayed herein are subject to change without notice. Vishay Intertechnology, Inc., or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Vishay's terms and conditions of sale for such products, Vishay assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of Vishay products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Vishay for any damages resulting from such improper use or sale.