

Lower Voltage Ceramic Disc Capacitors 100 VDC to 1000 VDC

Fig. 1

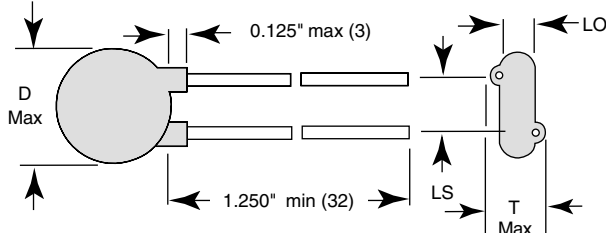
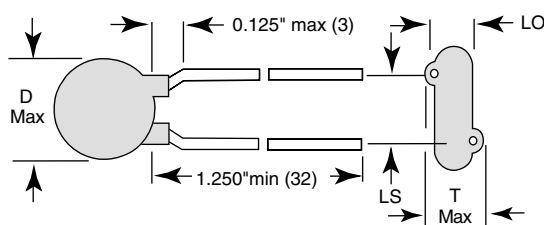


Fig. 2



LEAD OFFSET 'LO' (NOMINAL)	
100 VDC	0.040 (1.0 mm)
500 VDC	0.040 (1.0 mm)
1000 VDC	0.050 (1.3 mm)

INSULATION RESISTANCE:

100 VDC: min. 500 Ω F or 10 000 M Ω
 500 VDC: min. 750 Ω F or 15 000 M Ω
 1000 VDC: min. 1000 Ω F or 20 000 M Ω

TOLERANCE ON CAPACITANCE:

$\pm 5\%$; $\pm 10\%$; $\pm 20\%$

DISSIPATION FACTOR:

100 VDC: 3.0 % max. at 1 kHz; 1 V
 500 VDC: 3.0 % max. at 1 kHz; 1 V
 1000 VDC: 2.5 % max. at 1 kHz; 1 V

CATEGORY TEMPERATURE RANGE:

(- 55 to + 125) °C C0G, U2J, X7R, X7S
 (- 25 to + 85) °C X5F, Y5U, Y5V, Z5U

CLIMATIC CATEGORY ACC. TO EN60068-1:

55/125/21 C0G, U2J, X7R, X7S
 25/085/21 X5F, Y5U, Y5V, Z5U

OPERATING TEMPERATURE RANGE:

(- 55 to + 105) °C

FEATURES

- Low losses
- High stability
- High capacitance in small size
- Complete Range of Capacitance Values

APPLICATIONS

- Bypassing
- Resonant circuit
- Coupling

DESIGN

The capacitors consist of a ceramic disc of which both sides are silver-plated. Connection leads are made of tinned copper or tinned copper clad steel having diameters of 0.020" (0.51 mm) or 0.025" (0.64 mm).

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

The standard tolerances are $\pm 10\%$ or $\pm 20\%$.

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

CAPACITANCE RANGE:

10 pF to 0.15 μ F

RATED VOLTAGE:

100 VDC
 500 VDC
 1000 VDC

DIELECTRIC STRENGTH BETWEEN LEADS:

Component test:

100 VDC 500 VDC, 2 s
 500 VDC 1500 VDC, 2 s
 1000 VDC 2500 VDC, 2 s

CERAMIC DIELECTRIC:

C0G, U2J, (Class 1)
 X5F, X7R, X7S, Y5U, Y5V, Z5U (Class 2)



561R, 562R & 565R Series

Vishay Cera-Mite

Lower Voltage Ceramic Disc Capacitors
100 VDC to 1000 VDC



ORDERING INFORMATION, CERAMIC 100 VDC GENERAL PURPOSE								
C (pF)	TOL. (%)	D DIAMETER INCH (mm)	T THICKNESS INCH (mm)	LS LEAD SPACE	FIG.	WIRE SIZE		ORDERING CODE
AWG		INCH (mm)						
C0G (NP0)								
10	± 5 %	0.250 (6.4)	0.156 (4.0)	0.197 (5.0)	1	24	0.020 (.51)	561RTSQ10
22								561RTSQ22
U2J (N750)								
33	± 10 %	0.250 (6.4)	0.156 (4.0)	0.197 (5.0)	1	24	0.020 (0.51)	561RTSQ33
47								561RTSQ47
X7R								
100	± 10 %	0.250 (6.4)	0.156 (4.0)		1	24	0.020 (0.51)	562RTST10
220		0.250 (6.4)	0.156 (4.0)					562RTST22
330		0.250 (6.4)	0.156 (4.0)					562RTST33
470		0.250 (6.4)	0.156 (4.0)	0.197 (5.0)				562RTST47
1000		0.250 (6.4)	0.156 (4.0)			562RTSD10		
2200		0.370 (9.4)	0.156 (4.0)			22	0.025 (.64)	562RTSD22
3300		0.370 (9.4)	0.156 (4.0)					562RTSD33
X7S								
4700	± 10 %	0.440 (11.2)	0.156 (4.0)	0.197 (5.0)	1	22	0.025 (.64)	562RTSD47
6800		0.490 (12.4)	0.156 (4.0)					562RTSD68
0.01 μF		0.560 (14.2)	0.156 (4.0)	0.375 (9.5)				562RTSS10
0.022 μF		0.580 (14.7)	0.200 (5.1)					565RTSS22
Z5U								
0.005 μF	± 20 %	0.760 (19.3)	0.156 (4.0)	0.250 (6.4)	1	24	0.020 (0.51)	562RTGD50
0.01 μF		0.370 (9.4)	0.156 (4.0)			22	0.025 (.64)	562RTGS10
0.02 μF		0.440 (11.2)	0.156 (4.0)					562RTGS20
0.047 μF		0.510 (13.0)	0.200 (5.1)	0.375 (9.5)				565RTGS47
0.050 μF		0.700 (17.8)	0.200 (5.1)					565RTGS50
0.10 μF		0.510 (13.0)	0.200 (5.1)					565RTGP10

TAPE & REEL OPTIONS

Tape & Reel available on diameter sizes 0.250" to 0.680"

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



561R, 562R & 565R Series

Lower Voltage Ceramic Disc Capacitors
100 VDC to 1000 VDC

Vishay Cera-Mite

ORDERING INFORMATION, CERAMIC 500 VDC GENERAL PURPOSE								
C (pF)	TOL. (%)	D DIAMETER INCH (mm)	T THICKNESS INCH (mm)	LS LEAD SPACE	FIG.	WIRE SIZE		ORDERING CODE
AWG INCH (mm)								
X7R								
1000	± 10 %	0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	2	24	0.020 (0.51)	562R5TSD10
1500	± 10 %	0.370 (9.4)						562R5TSD15
2200	± 10 %					22	0.025 (0.64)	562R5TSD22
3300	± 10 %	0.440 (11.2)			562R5TSD33			
4700	± 10 %	0.490 (12.4)			562R5TSD47			
X7S								
0.0068	± 10 %	0.490 (12.4)	0.156 (4.0)	0.250 (6.4)	1	22	0.025 (0.64)	562R5TSD68
0.010	± 10 %	0.560 (14.2)	0.156 (4.0)	0.375 (9.5)				562R5TSS10
0.022	± 20 %	0.680 (17.3)						562R5TSS22
0.033	± 20 %	0.770 (19.6)	0.200 (5.1)	0.375 (9.5)				562R5TSS33
Y5U								
1000	± 20 %	0.250 (6.4)	0.156 (4.0)	0.250 (6.4)	2	22	0.025 (0.64)	562R5TSSD10
Y5V								
0.10 µF	- 20 + 50 %	0.950 (24.1)	0.200 (5.1)	0.375 (9.5)	1	22	0.025 (0.64)	562R5HKSP10
Z5U								
5000	- 20 + 80 %	0.370 (9.4)	0.156 (4.0)	0.250 (6.4)	1	22	0.025 (0.64)	562R5TSD50
0.010 µF	± 20 %	0.440 (11.2)						562R5GASS10
0.010 µF	- 20 + 80 %							562R5HKSS10
0.020 µF	± 20 %	0.560 (14.2)	0.156 (4.0)	0.375 (9.5)				562R5GASS20
0.050 µF	± 20 %	0.890 (22.6)						562R5GAS50
0.050 µF	- 20 + 80 %	0.580 (14.7)	0.200 (5.1)	0.375 (9.5)				562R5HKS50
0.10 µF	± 20 %	0.770 (19.6)						565R5GAP10
0.10 µF	- 20 + 80 %							565R5HKP10
0.15 µF	- 20 + 50 %							565R5GAP15
0.20 µF	± 20 %							0.950 (24.1)

TAPE & REEL OPTIONS

- Tape & Reel available on diameter sizes 0.250" to 0.680"
- To specify T & R, add two letter suffix to the ordering code (Details of the packaging code see general selection of the catalog)

561R, 562R & 565R Series

Vishay Cera-Mite

Lower Voltage Ceramic Disc Capacitors
100 VDC to 1000 VDC



ORDERING INFORMATION, CERAMIC 1000 VDC GENERAL PURPOSE									
C (pF)	TOL. (%)	D DIAMETER INCH (mm)	T THICKNESS INCH (mm)	LS LEAD SPACE	FIG.	WIRE SIZE		ORDERING CODE	
AWG		INCH (mm)							
C0G (NP0)									
10	± 20 %	0.250 (6.4)	0.156 (4.0)	0.250 (6.4)	2	24	0.020 (0.51)	561R5GAQ10	
20								561R5GAQ20	
U2J (N750)									
33	± 20 %	0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	2	24	0.020 (0.51)	561R5GAQ47	
47								561R5GAQ34	
X5F									
100	± 20 %	0.250 (6.4)	0.156 (4.0)	0.250 (6.4)	2	24	0.020 (0.51)	562R5GAT10	
150								562R5GAT15	
200								562R5GAT20	
220								562R5GAT22	
330								562R5GAT33	
470								562R5GAT47	
500								562R5GAT50	
X7R									
1000	± 20 %	0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	2	24	0.020 (0.51)	562R5GAD10	
Y5U									
1000	± 20 %	0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	2	24	0.020 (0.51)	562R5HKD10	
Z5U									
1200	± 20 %	0.290 (7.4)	0.156 (4.0)	0.250 (6.4)	2	24	0.020 (0.51)	562R5GAD12	
1500								562R5GAD15	
2000								562R5GAD20	
2200								562R5GAD22	
2500								562R5GAD25	
2700								562R5GAD27	
3000								562R5GAD30	
3300								562R5GAD33	
4700		0.370 (9.4)	0.156 (4.0)	0.250 (6.4)	1	22	0.025 (0.64)	562R5GAD47	
5000		0.370 (9.4)	0.156 (4.0)	0.250 (6.4)				562R5GAD50	
6800		0.440 (11.2)	0.156 (4.0)	0.250 (6.4)				562R5GAD68	
8200		0.440 (11.2)	0.156 (4.0)	0.250 (6.4)				562R5GAD82	
0.010 µF		0.490 (12.4)	0.156 (4.0)	0.375 (9.5)				562R5GAS10	
0.010 µF		0.490 (12.4)	0.156 (4.0)	0.250 (6.4)				562R5HKMS10	
0.010 µF		+ 100 - 0 %	0.490 (12.4)	0.156 (4.0)				0.375 (9.5)	562R5HKS10
0.015 µF			± 20 %	0.560 (14.2)				0.156 (4.0)	0.375 (9.5)
0.020 µF	0.680 (17.3)			0.156 (4.0)	0.375 (9.5)	562R5GAS20			
0.050 µF	0.770 (19.6)			0.200 (5.1)	0.375 (9.5)	565R10HKS50			
0.10 µF	0.950 (24.1)			0.200 (5.1)	0.375 (9.5)	565R10GAP10			
Y5V									
0.15 µF	± 20 %	0.950 (24.1)	0.200 (5.1)	0.375 (9.5)	1	22	0.025 (0.64)	565R10GAP15	

TAPE & REEL OPTIONS

Tape & Reel available on diameter sizes 0.250" to 0.680"

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



Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Vishay:

[5TSD68RR](#) [5TSD47RR](#) [5TSD50](#) [5TSD33](#) [5TSS22](#) [5TSS33](#) [5TSS10](#) [5TSD22TR](#) [5TSD22RE](#) [5TSD10QA](#)
[5TSD10RR](#) [5TSD10RE](#) [5TSSD10](#) [5TSD15QT](#) [5TSD68](#) [5TSD22](#) [5TSD47](#) [5TSD15](#) [5TSD33RE](#) [5TSD10](#)
[562CY5UCK101AH103M](#) [562CAA102EH103PA65](#) [562CZ5UBJ102AH103Z](#) [562CX5FBB102AC121K](#)
[562CBA501AM103MA42](#) [TSS10](#) [562CZ5UQA501AG103Z](#) [562CJE102AL203MA65](#) [562CBC251AH472MA24](#)
[562CX5RVE102EE102K](#) [562CZ5UBJ501AM333Y](#) [562CBD102AH103ZA83](#) [562CX5FQA102AG182K](#)
[562COE0FA601EM503Z](#) [562CFB501AL503MA60](#) [562CZ5UFF501AG103M](#) [TST33](#) [562CJE501AG103ZA14](#)
[562CAA501AG103MB04](#) [562CX7RBB501AE102M](#) [562CX7RQD101EC102K](#) [562CZ5UBB501AG103M](#)
[562CZ5UJJ102AH103Z](#) [562CBA201EE102KA09](#) [562CX5FXE102EL472M](#) [562CX5FJE102EE102K](#) [TSD33](#)
[562CZC102AF221KA38](#) [562CX5ECK102EF681J](#) [562CX7RQA501EC221K](#) [562CX5ECK102EC101J](#)
[562CFB501AG103MB03](#) [562CZ5UJE101AF103M](#) [562CBA102EL103MA10](#) [562CZ5URJ102AH103M](#)
[562CAA102AH103MA65](#) [562CYK501EF102JA23](#) [562CJE102AF502MC27](#) [562CZ5UBB501AE102P](#)
[562CZC102AF471KA38](#) [TSD68](#) [562C0E0JE501EZ104Z](#) [TGS50](#) [562CZ5UBC102AH103M](#) [562CZ5UFZ501AP503M](#)
[562CZ5UFC500AF103M](#) [562CZ5UJE501AJ203M](#) [562CBA501AH153ZB18](#) [562CBD102AE102MB92](#)
[562CX5RCK102EM103K](#) [562CY5UAA102EM203M](#) [562CX5FKE102EH222K](#) [TGS20](#) [562CKJ501AP503MA03](#)
[562CX5FCJ501EG222K](#) [TGS10](#) [562CFC101AF103ZA03](#) [562CX5FTR102EC101K](#) [562CZ5UAA102AM223M](#) [TSQ47](#)
[562CY5PBA501EE152K](#) [562CX5EYK501EH152J](#) [562CX5FRE102EE221K](#) [562CY5UBA102EE102P](#)
[562CX5FBA102EE681K](#) [TSS47](#) [562CZ5URE501AG103Z](#) [562CBA102AF472MC15](#) [TGS47](#) [562CBA501AG103ZA89](#)
[562CZ5UQB102AH103M](#) [562CFA501AG103MB02](#) [562CX5FJJ102AF102K](#) [562CZ5UJJ501AF502M](#)
[562CX5EBA102AE221M](#) [TSD47](#) [562CX5RBA501EF222M](#) [562CEF102AE221KC09](#) [562CX5RAA102EM103M](#)
[562CFB102AE152MC06](#)