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Vishay Cera-Mite

# AC Line Rated Ceramic Disc Capacitors Class X2, 400 V<sub>AC</sub>



QUICK REFERENCE DATA					
DESCRIPTION	VALUE				
Ceramic Class	2				
Ceramic Dielectric	Y5V	Z5U			
Voltage (V <sub>AC</sub> )	400	400			
Min. Capacitance (pF)	9000	10 000			
Max. Capacitance (pF)	100 000	10 000			
Mounting	Ra	dial			

## **INSULATION RESISTANCE**

Min. 1000  $\Omega F$ 

## **TOLERANCE ON CAPACITANCE**

± 20 %

## **DISSIPATION FACTOR**

2.0 % max. at 1 kHz; 1 V

## **CERAMIC DIELECTRIC**

Y5V, Z5U (class 2)

#### **CATEGORY TEMPERATURE RANGE**

-25 °C to +125 °C

## **CLIMATIC CATEGORY ACC. TO EN60068-1**

25/125/21

## **OPERATING TEMPERATURE RANGE**

-30 °C to +125 °C

## **FEATURES**

• Complying with IEC 60384-14 3rd edition



- High reliability
- Radial leads
- Singlelayer AC disc safety capacitors

RoHS

Material categorization: for definitions of compliance please see <a href="https://www.vishay.com/doc?99912"><u>www.vishay.com/doc?99912</u></a>

#### **APPLICATIONS**

- X2 according to IEC 60384-14.3
- Across-the-line
- RFI filtering

#### **DESIGN**

The capacitors consist of a ceramic disc of which both sides are silver-plated. Connection leads are made of tinned copper having a diameter of 0.025" (0.64 mm). The capacitors may be supplied with radial kinked or straight leads having a lead spacing of 0.375" (9.5 mm) or 0.250" (6.4 mm). The standard tolerance is  $\pm$  20 %. Coating is made of flame retardant epoxy resin in accordance with "UL 94 V-0."

#### **CAPACITANCE RANGE**

9 nF to  $0.1 \mu F$ 

#### **RATED VOLTAGE**

IEC 60384-14.3: X2: 400 V<sub>AC</sub>, 50 Hz

## **DIELECTRIC STRENGTH BETWEEN LEADS**

Component test:

1250 V<sub>AC</sub>, 50 Hz, 2 s

As repeated test admissible only once with:

1080 V<sub>AC</sub>, 50 Hz, 2 s

Random sampling test (destructive test):

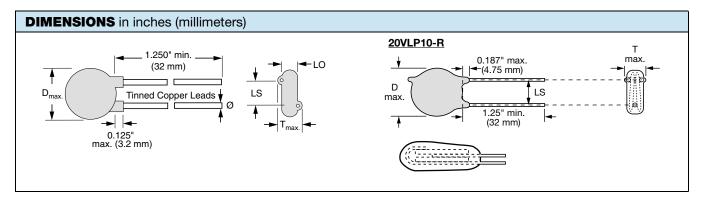
1250 V<sub>AC</sub>, 50 Hz, 60 s

## **DIELECTRIC STRENGTH OF BODY INSULATION**

2300 V<sub>AC</sub>, 50 Hz, 60 s (destructive test)



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ORDERING INFORMATION, CERAMIC X2 CAPACITORS 20VL								
С (µF)	TOL. (%)	D <sub>max.</sub> DIAMETER INCH (mm)	T <sub>max.</sub> THICKNESS INCH (mm)	AWG	IRE SIZE INCH (mm)	LS LEAD SPACE INCH (mm) ± 1 mm	LO LEAD OFFSET INCH (mm) ± 0.5 mm	ORDERING CODE
Y5V		•						
0.009	± 20	0.530 (13.5)	0.150 (3.8)		0.025 (0.64)	0.375 (9.5)	0.055 (1.4)	20VLD90-R
0.010	± 20	0.620 (15.7)	0.150 (3.8)	22			0.063 (1.6)	20VLS10-R
0.020	± 20	0.720 (18.3)	0.150 (3.8)	22			0.055 (1.4)	20VLS20-R
0.100	± 20	0.950 (24.1)	0.230 (5.8)				0.067 (1.7)	20VLP10-R
Z5U		•	•	•	•			
0.010	± 20	0.530 (13.5)	0.160 (4.1)	22	0.025 (0.64)	0.250 (6.4)	0.067 (1.7)	20VLSS10-R

#### Notes

- Alternate lead spacings of 7.5 mm and 10 mm are available bulk or tape and reel on request.
- Minimum lead clearance according to IEC 60384-14: 0.118" (3 mm)

## **TAPE AND REEL OPTIONS**

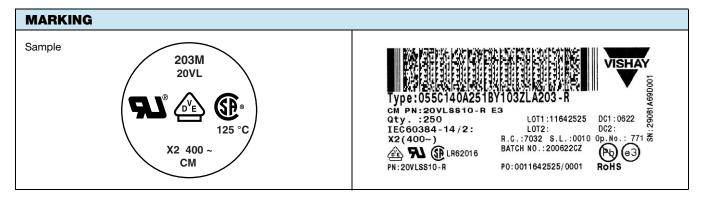
Part number codes and specifications for tape and reel packaging are found in the general information document - find web-link below.

APPROVALS				
IEC 60384-14.3 - Safety tests This approval together with CB test certificate substitutes	all national approvals	S.		
CB Certificate				^
X2-capacitor: CB test certificate:	DE 1 - 19450	9 nF to 0.1 μF	400 V <sub>AC</sub>	DVE
VDE				^
X2-capacitor: VDE marks approval:	40003982	9 nF to 0.1 μF	$400 V_{AC}$	$Z_{\vee}$
DIN EN 60384-14 VDE 0565-1-1:2006-04 - Safety tests				D.F
Underwriters Laboratories Inc.				
X2-capacitor: UL test certificate:	E99264	9 nF to 0.1 μF	$400 V_{AC}$	<b>63 1</b> ®
UL 60384-14, CSA E60384-1:03, CSA E60384-14:09				C TUS



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RELATED DOCUMENTS		
General Information	www.vishay.com/doc?23140	
CB Test Certificate	www.vishay.com/doc?22247	
VDE Marks Approval	www.vishay.com/doc?22246	
UL Test Certificate	www.vishay.com/doc?22245	



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Revision: 02-Oct-12 Document Number: 91000



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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
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#### Как с нами связаться

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