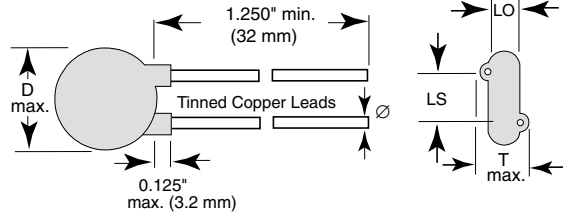


AC Line Rated Disc Capacitors Class X2, 400 VAC



LO' = 0.132" (3.4 mm) typ.

INSULATION RESISTANCE

Min. 1000 ΩF

TOLERANCE ON CAPACITANCE

± 20 %, - 20 % to + 80 %

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

- Worldwide safety agency recognition
Underwriters laboratories UL 1283
Canadian standards association - CSA 22.2
European EN132400 to IEC 60384-14 second edition
- Complete range of capacitance values
- Radial leads
- Compliant to RoHS directive 2002/95/EC



APPLICATIONS

- Required in AC Power Supply and Filter Applications
- Specific Industry Requirements

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 tolerances are ± 20 % or + 80 % - 20 %. Coating is made of flame retardant epoxy resin in accordance with "UL 94 V-0."

CAPACITANCE RANGE

9 nF to 0.1 μF

RATED VOLTAGE

IEC 60384-14.12:	(X2): 400 V _{AC} , 50 Hz
UL 1238:	250 V _{AC} , 60 Hz
CSA 22.2 No.8:	250 V _{AC} , 60 Hz

DIELECTRIC STRENGTH BETWEEN LEADS

Component test:

1250 V_{AC}, 50 Hz, 2 s

As repeated test admissible only once with:

1080 V_{AC}, 50 Hz, 2 s

Random sampling test (destructive test):

1250 V_{AC}, 50 Hz, 60 s

DIELECTRIC STRENGTH OF BODY INSULATION

2300 V_{AC}, 50 Hz, 60 s (destructive test)

20VL Series

Vishay Cera-Mite

AC Line Rated Disc Capacitors
Class X2, 400 VAC



ORDERING INFORMATION, CERAMIC X2 CAPACITORS 20VL							
C (pF)	TOL. (%)	D DIAMETER INCH (mm)	T THICKNESS INCH (mm)	WIRE SIZE		LS LEAD SPACE INCH (mm)	ORDERING CODE
				AWG	INCH (mm)		
Y5V							
0.009 μ F	$\pm 20\%$	0.530 (13.5)	0.150 (3.8)	22	0.025 (0.64)	0.375 (9.5)	20VLD90-R
0.010 μ F	$\pm 20\%$	0.620 (15.7)	0.150 (3.8)				20VLS10-R
0.020 μ F	+ 80% - 20%	0.720 (18.3)	0.150 (3.8)				20VLS20-R
0.100 μ F	$\pm 20\%$	0.940 (23.9)	0.240 (6.1)				20VLP10-R ⁽¹⁾
Z5U							
0.010 μ F	+ 80% - 20%	0.530 (13.5)	0.160 (4.1)	22	0.025 (0.64)	0.250 (6.4)	20VLS10-R

Notes

- (1) 20VLP10-R not available with CSA 22.2 no. 8 recognition
- Alternate lead spacings of 7.5 mm and 10 mm are available bulk or tape and reel on request.
- European required minimum lead clearance (prevents use of inside crimp) 0.118" (3 mm)

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.)

APPROVALS						
IEC 60384 - 14/2 nd Issue (1993) incl. Am.1 (1995) - Safety Tests EN132400 (1994) - Safety Tests						
That approval together with CB Test Certificate substitutes the national approval of the following nations:						
Belgium	France	Italy	Austria	China	Japan	Spain
Denmark	Greece	Luxembourg	Portugal	Singapore	Poland	United Kingdom
Germany	Ireland	Netherlands	Sweden	Slovenia	Hungaria	Czech Republic
Finland	Iceland	Norway	Switzerland	Korea	Israel	
X2 Capacitor: CB-Test Certificate:		DE 1-19450	9000 pF to 0.1 μ F	400 V _{AC}		
UNDERWRITERS LABORATORIES INC.						
UL 1238	EMI filters Agency File/License	E128046 V1S1	9000 pF to 0.1 μ F	250 V _{AC}		
CANADIAN STANDARDS ASSOCIATION						
CSA C22.8	EMI filters Agency File/License	LR 62016-3	9000 pF to 0.020 μ F	250 V _{AC}		

Note

- IEC 60384-14 Subclass X Capacitors:
- A capacitor or a type suitable for use in situations where failure of the capacitor would not lead to danger of electric shock.
 - Class X capacitors are divided into sub-classes according to the peak impulse test voltage superimposed on the main voltage.

MARKING	
Sample	
<p>Type: 055C140A251BY103ZLA203-R CM PN: 20VLS10-R E3 Qty.: 250 IEC60384-14/2: X2(400~) R.C.: 7032 S.L.: 0010 Op.No.: 771 BATCH NO.: 200622CZ PN: 20VLS10-R PO: 0011642525/0001 LOT1: 11642525 LOT2: DC1: 0622 DC2: SN: 29081A69D001 RoHS</p>	



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

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 in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk and agree to fully indemnify and hold Vishay and its distributors harmless from and against any and all claims, liabilities, expenses and damages arising or resulting in connection with such use or sale, including attorneys fees, even if such claim alleges that Vishay or its distributor was negligent regarding the design or manufacture of the part. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

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