AC Line Rated Ceramic Disc Capacitors
Class X1, 275 V_{AC}

QUICK REFERENCE DATA	
DESCRIPTION	**VALUE**
Ceramic Class	2
Ceramic Dielectric	Y5V
Voltage (V_{AC})	275
Min. Capacitance (pF)	4700
Max. Capacitance (pF)	22 000
Mounting	Radial

MARKING

Marking indicates series, AC rating, capacitance, tolerance code, and approvals.

OPERATING TEMPERATURE RANGE

-40 °C to +125 °C

TEMPERATURE CHARACTERISTICS

Class 2 Y5V

SECTIONAL SPECIFICATIONS

Climatic category (according to EN 60058-1)

Class 2 40/125/21

APPROVALS

IEC 60384-14.3

FEATURES

- Complying with IEC 60384-14 3rd edition
- High reliability
- Wide range of different leadstyles
- Singlelayer AC disc safety capacitors
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb e3 RoHS COMPLIANT

APPLICATIONS

- X1 according to IEC 60384-14.3
- EMI / RFI suppression

DESIGN

The capacitors consist of ceramic disc both sides of which are silver plated. Connection leads are made of tinned copper having diameters of 0.6 mm.

The capacitors may be supplied with straight or kinked leads having a lead spacing of 7.5 mm.

Coating is made of blue colored flame retardant epoxy resin in accordance with UL 94 V-0.

CAPACITANCE RANGE

4.7 nF to 22 nF

TOLERANCE ON CAPACITANCE

± 20 %

RATED VOLTAGE

X1: 275 V_{AC}, 50 Hz (IEC 60384-14.3)
275 V_{AC}, 50 Hz/60 Hz (US/UL/CSA 60384-14)

TEST VOLTAGE

- 4000 V_{DC}, 2 s — Component test (100 %)
- 3500 V_{DC}, 60 s — Random sampling test (destructive)
- 2000 V_{AC}, 50 Hz, 60 s — Voltage proof of coating (destructive)

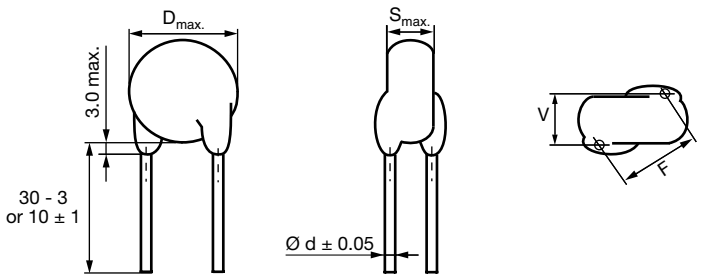
INSULATION RESISTANCE AT 500 V_{DC}

≥ 6000 MΩ (60 s)

DISSIPATION FACTOR

Class 2: max. 2.5 % (1 kHz)

DIMENSIONS in millimeters



TECHNICAL DATA

CAPACITANCE C (pF)	CAPACITANCE TOLERANCE	BODY DIAMETER $D_{MAX.}$ (mm)	BODY THICKNESS $S_{MAX.}$ (mm)	LEAD SPACING (1) F (mm) ± 1 mm	LEAD DIAMETER (1) d (mm) ± 0.05 mm	WIDTH (1) V (mm) ± 0.5 mm	PART NUMBER MISSING DIGITS SEE ORDERING CODE BELOW
Y5V (2F3)							
4700	± 20 %	11.0	3.0	7.5	0.6	1.4	W1X472#CV###KR
6800		11.0					W1X682#CV###KR
10 000		15.0					W1X103#CV###KR
15 000	-20 %/+50 %	17.0				1.6	W1X153#CV###KR
22 000		20.0					W1X223#CV###KR

Note

(1) Standard lead configuration, other lead spacing and diameter available on request

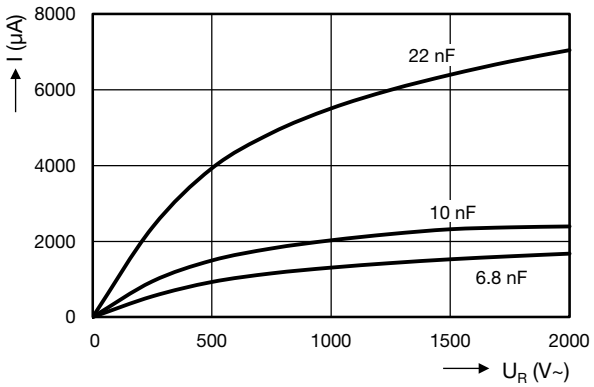
ORDERING CODE

#	7th digit	Capacitance tolerance	± 10 % = K, ± 20 % = M				
###	10th to 12th digit	Lead configuration	see "General Information"				
Example	**W1X**	**223**	**M**	**CV**	**CRU**	**K**	**R**
	Series	Capacitance value	Tolerance code	Voltage code	Lead configuration	Internal code	RoHS compliant

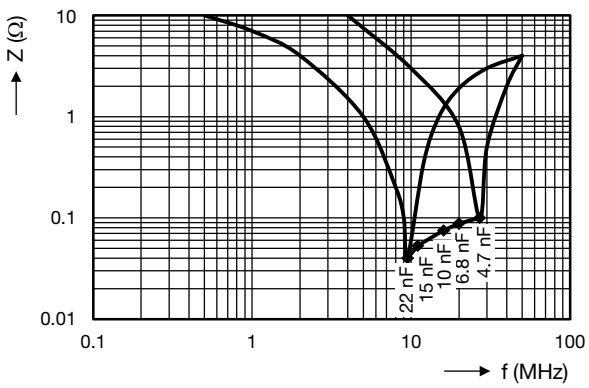
MARKING

APPROVALS				
IEC 60384-14.3 - Safety tests This approval together with CB test certificate substitutes all national approvals.				
CB Certificate				
X1-capacitor: CB test certificate: Minimum thickness of insulation: 0.4 mm	DE 1-11148-A1	4.7 nF to 22 nF	275 V_{AC}	
VDE				
X1-capacitor: VDE marks approval: DIN EN 60384-14 VDE 0565-1-1:2006-04 - Safety tests Minimum thickness of insulation: 0.4 mm	137890	4.7 nF to 22 nF	275 V_{AC}	

LEAKAGE CURRENT VS. VOLTAGE (typical)



IMPEDANCE VS. FREQUENCY (typical)



RELATED DOCUMENTS	
General Information	www.vishay.com/doc?22001
CB Test Certificate	www.vishay.com/doc?22223
VDE Marks Approval	www.vishay.com/doc?22224

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