

AC Line Rated Ceramic Disc Capacitors Class X1, 440 V_{AC}, Class Y2, 250 V_{AC}



QUICK REFERENCE DATA	
DESCRIPTION	VALUE
Ceramic Class	2
Ceramic Dielectric	Y5U
Voltage (V _{AC})	440 250
Min. Capacitance (pF)	1000
Max. Capacitance (pF)	12 000
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 Y5U

SECTIONAL SPECIFICATIONS

Climatic category (according to EN 60058-1)

Class 2 40/125/21

APPROVALS

IEC 60384-14.3

UL 60384-14.1

CSA E60384-1:03 2nd edition, CSA E60384-14:09 2nd edition

FEATURES

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



RoHS
COMPLIANT

APPLICATIONS

- X1, Y2 according to IEC 60384-14.3
- Line-by-pass

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 5.0 mm or 7.5 mm.

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

CAPACITANCE RANGE

1.0 nF to 12 nF

TOLERANCE ON CAPACITANCE

± 20 %

RATED VOLTAGE

- X1: 440 V_{AC}, 50 Hz (IEC 60384-14.3)
 440 V_{AC}, 50 Hz/60 Hz (US/UL/CSA 60384-14)
- Y2: 250 V_{AC}, 50 Hz (IEC 60384-14.3)
 250 V_{AC}, 50 Hz/60 Hz (US/UL/CSA 60384-14)

TEST VOLTAGE

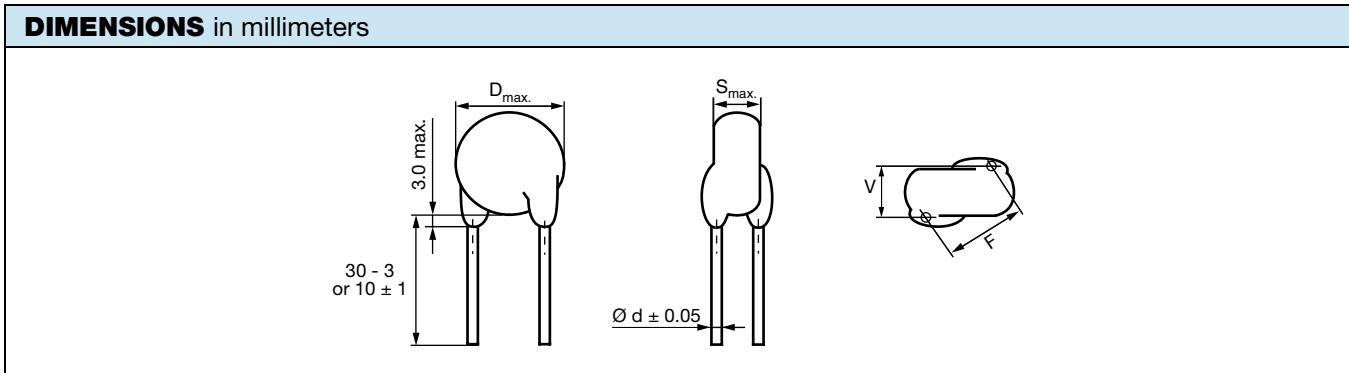
- 2500 V_{AC}, 50 Hz, 2 s Component test (100 %)
- 1500 V_{AC}, 50 Hz, 60 s Random sampling test (destructive)
- 2000 V_{AC}, 60 Hz, 60 s Voltage proof of coating (destructive)

INSULATION RESISTANCE AT 500 V_{DC}

≥ 6000 MΩ (60 s)

DISSIPATION FACTOR

Class 2: max. 2.5 % (1 kHz)



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
Y5U (2E3)							
1000	± 20 %	6.5	4.5	5.0	0.6	1.4	WYO102#CM###KR
1500		8.0					WYO152#CM###KR
1800		8.0					WYO182#CM###KR
2200		9.0					WYO222#CM###KR
2500		9.0					WYO252#CM###KR
3300		11.0					WYO332#CM###KR
4700		12.0		WYO472#CM###KR			
5000		12.0		WYO502#CM###KR			
6800		17.0		WYO682#CM###KR			
8200		17.0		WYO822#CM###KR			
10 000		21.0		WYO103#CM###KR			
12 000		21.0		WYO123#CP###KR			

Note

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

ORDERING CODE							
#	7 th digit	Capacitance tolerance	± 10 % = K, ± 20 % = M				
###	10 th to 12 th digit	Lead configuration	see "General Information"				
Example	WYO	103	M	CM	CF0	K	R
	Series	Capacitance value	Tolerance code	Voltage code	Lead configuration	Internal code	RoHS compliant

MARKING

WYO 1.0 nF to 2.5 nF

WYO 3.3 nF to 12 nF

Type: WY0102MCMCF0KR LOT1: 033185 DC1: 1134
 Cap.: 1000pF ±20% LOT2: DC2:
 Ur.: 250/440VAC BATCH NO.: 201134GZ
 Qty.: 2000 REGION: 7032 S.L.: 0010
 IEC 60 384-14/2: Y2(250~), X1(440~)
 EN132400: 125°C cRoHS
 PN: WY0102MCMCF0KR P0: 0031254565/0001 SN: 28033185B007

APPROVALS

IEC 60384-14.3 - Safety tests
 This approval together with CB test certificate substitutes all national approvals.

CB Certificate

Y2-capacitor: CB test certificate:	US-19593-UL	1 nF to 12 nF	250 V _{AC}
X1-capacitor: CB test certificate:	US-19593-UL	1 nF to 12 nF	440 V _{AC}

Minimum thickness of insulation: 0.4 mm


VDE

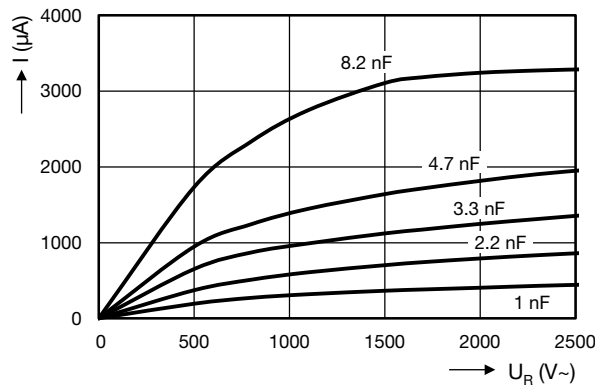
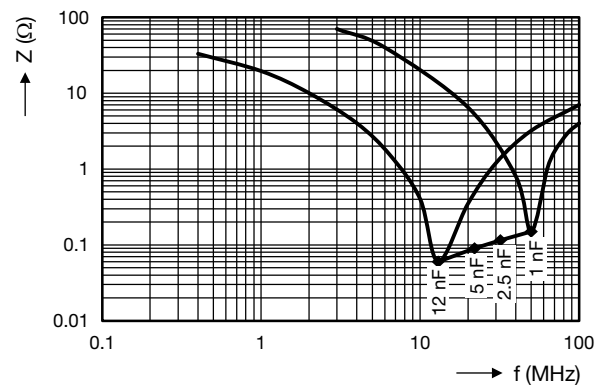
Y2-capacitor: VDE marks approval:	133769	1 nF to 12 nF	250 V _{AC}
X1-capacitor: VDE marks approval:	133769	1 nF to 12 nF	440 V _{AC}

DIN EN 60384-14 VDE 0565-1-1:2006-04 - Safety tests
 Minimum thickness of insulation: 0.4 mm


Underwriters Laboratories Inc./Canadian Standards Association

Y2-capacitor: UL-test certificate:	E183844	1 nF to 12 nF	250 V _{AC}
X1-capacitor: UL-test certificate:	E183844	1 nF to 12 nF	440 V _{AC}

UL 60384-14.1, CSA E60384-1:03 2nd edition, CSA E60384-14:09 2nd edition
 Across-the-line, antenna-coupling and line-by-pass component
 Minimum thickness of insulation: 0.4 mm


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?22225
VDE Marks Approval	www.vishay.com/doc?22227
UL Test Certificate	www.vishay.com/doc?22226



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