AC Line Rated Disc Capacitors
Class X2, 400 V_{AC}

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

RoHS COMPLIANT

APPLICATIONS

- Required in AC power supply and filter applications
- Specific industry requirements

QUICK REFERENCE DATA		
DESCRIPTION	VALUE	
Ceramic Class	2	
Ceramic Dielectric	Y5V	Z5U
Voltage (V_{AC})	250, 400	250, 400
Min. Capacitance (pF)	9000	10 000
Max. Capacitance (pF)	100 000	10 000
Mounting	Through hole	

INSULATION RESISTANCE

Min. 1000 ΩF

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

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 ± 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

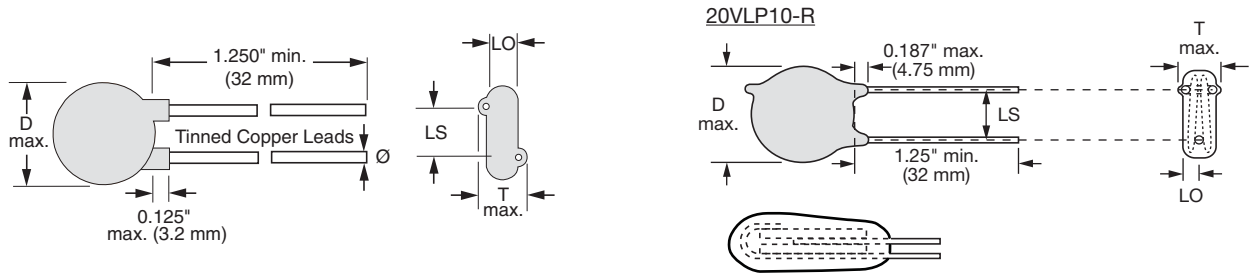
Random sampling test (destructive test):

1250 V_{AC}, 50 Hz, 60 s

DIELECTRIC STRENGTH OF BODY INSULATION

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

DIMENSIONS in inches (millimeters)



LO = 0.132" (3.4 mm) typ.

ORDERING INFORMATION, CERAMIC X2 CAPACITORS 20VL

C (µF)	TOL. (%)	D DIAMETER INCH (mm)	T THICKNESS INCH (mm)	WIRE SIZE AWG	WIRE SIZE INCH (mm)	LS LEAD SPACE INCH (mm)	ORDERING CODE
Y5V							
0.009	± 20	0.530 (13.5)	0.150 (3.8)	22	0.025 (0.64)	0.375 (9.5)	20VLD90-R
0.010	± 20	0.620 (15.7)	0.150 (3.8)				20VLS10-R
0.020	± 20	0.720 (18.3)	0.150 (3.8)				20VLS20-R
0.100	± 20	0.940 (23.9)	0.240 (6.1)				20VLP10-R (1)
Z5U							
0.010	± 20	0.530 (13.5)	0.160 (4.1)	22	0.025 (0.64)	0.250 (6.4)	20VLSS10-R

Notes

- 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)

(1) 20VLP10-R not available with CSA 22.2 no. 8 recognation

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 - 14/2nd 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 µF	400 V_{AC}
UNDERWRITERS LABORATORIES INC.				
UL 1238	EMI filters Agency File/ License	E128046 V1S1	9000 pF to 0.1 µF	250 V_{AC}
CANADIAN STANDARDS ASSOCIATION				
CSA C22.8	EMI filters Agency File/ License	LR 62016-3	9000 pF to 0.020 µF	250 V_{AC}

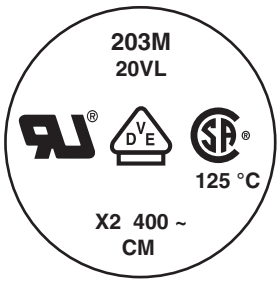
Note

IEC 60384-14 subclass X capacitors:

- A capacitor of 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



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Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

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Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:
moschip.ru
moschip.ru_4
moschip.ru_6
moschip.ru_9