AC Line Rated Ceramic Disc Capacitors: Class X1, 760 VAC and Class Y1, 500 VAC Compact Size X1/Y1 Safety Capacitors

KEY BENEFITS
- Comply with IEC 60384-14 4th edition
- Withstands 85 / 85 / 1000 h test
- Can pass 10 kV pulses (10 per polarity)
- Reduced size for compact designs
- High reliability
- Vertical (inline) kinked or straight leads

APPLICATIONS
- X1, Y1 according to IEC 60384-14.4
- Across-the-line
- Line bypass
- Antenna coupling

RESOURCES
- For technical questions contact CDC@vishay.com
- Material categorization: For definitions please see www.vishay.com/doc?99912

www.vishay.com
SINGLE-LAYER CERAMIC CAPACITORS

AC Line Rated Ceramic Disc Capacitors
Class X1, 760 VAC and Class Y1, 500 VAC Compact Size X1/Y1 Safety Capacitors

**QUICK REFERENCE DATA**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceramic Class</td>
<td>2</td>
</tr>
<tr>
<td>Ceramic Dielectric</td>
<td>YSU</td>
</tr>
<tr>
<td>Voltage (V&lt;sub&gt;AC&lt;/sub&gt;)</td>
<td>500</td>
</tr>
<tr>
<td>Min. Capacitance (pF)</td>
<td>470</td>
</tr>
<tr>
<td>Max. Capacitance (pF)</td>
<td>4700</td>
</tr>
<tr>
<td>Mounting</td>
<td>Radial</td>
</tr>
</tbody>
</table>

**OPERATING TEMPERATURE RANGE**
-40 °C to +125 °C

**TEMPERATURE CHARACTERISTICS**
Y5U

**SECTIONAL SPECIFICATIONS**
Climatic category (according to EN 60058-1) 40/125/21

**COATING**
According to UL 94 V-0
Epoxy resin, isolating, flame retardant
Halogen-free

**APPROVALS**
IEC 60384-14.4
UL 60384-14
DIN EN 60384-14
CSA E60384-1:03, CSA E60384-14:09
CQC11-471112-2009

**PACKAGING**
Bulk, tape and reel, taped ammopack

**DESIGN**
The capacitor consists of a ceramic disc which is copper plated on both sides. Connection leads are made of tinned copper clad steel having a diameter of 0.6 mm.
The capacitors may be supplied with vertical (inline) kinked leads having a lead spacing of 10.0 mm, or 12.5 mm. Encapsulation is made of flame retardant epoxy resin in accordance with UL 94 V-0.

**CAPACITANCE RANGE**
470 pF to 4700 pF

**RATED VOLTAGE**
IEC 60384-14.4:
(X1): 760 V<sub>AC</sub>, 50 Hz
(Y1): 500 V<sub>AC</sub>, 50 Hz

**TEST VOLTAGE**
Component test (100 %):
4000 V<sub>AC</sub>, 50 Hz, 2 s
Random sampling test (destructive test):
4000 V<sub>AC</sub>, 50 Hz, 60 s
Voltage proof of coating (destructive test):
4000 V<sub>AC</sub>, 50 Hz, 60 s

**INSULATION RESISTANCE**
≥ 10 000 MΩ

**CAPACITANCE TOLERANCE**
± 20 %

**DISSIPATION FACTOR**
Max. 2.5 % (1 kHz)