RF Power Tubular Capacitors with Screw Terminals and Mounting Tags, Class 1 Ceramic

**FEATURES**
- High voltage ratings
- High reliability
- Wide range of capacitance values

**APPLICATIONS**
- Induction and dielectric heating
- Antenna units
- Filter, bypass, and coupling circuits

**CAPACITANCE RANGE**
100 pF to 4.7 nF

**CAPACITANCE TOLERANCE**
± 20 %; ± 10 %; ± 5 %

**CERAMIC DIELECTRICS**
- R7 (TCC + 100 ppm/K)
- R16 (TCC + 100 ppm/K)
- R42 (TCC - 250 ppm/K)
- R85 (TCC - 750 ppm/K)
- R230 (TCC - 750 ppm/K)

**RATED VOLTAGE**
- 7.0 kV_p
- 8.0 kV_p
- 10 kV_p
- 11 kV_p

**DIELECTRIC STRENGTH TEST**
200 % of rated AC voltage (50 Hz, 5 minutes)

**DISSIPATION FACTOR**
- R7: max. 0.07 %
- R16: max. 0.04 %
- R42, R85, R230: max. 0.05 %

Measuring frequencies:
- 1 MHz (< 1 nF); 300 kHz or 100 kHz (≥ 1 nF)

**INSULATION RESISTANCE**
Min. 100 000 MΩ (at 25 °C)

**OPERATING TEMPERATURE RANGE**
-55 °C to +100 °C

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**MATERIAL**
Capacitor elements made from class 1 ceramic dielectric with noble metal electrodes.
Connection terminals: made from copper / brass, silver plated.

**FINISH**
Capacitor body completely protective lacquered. The contoured insulating rims are additionally glazed.

**MARKING**
Type designator, capacitance value and tolerance, rated peak voltage, ceramic material code, production date code, manufacturer logo.

**ACCESSORIES ADDED**
All capacitors are supplied with the necessary Hex. nuts and washers to make the connection to the conductor rod.

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**QUICK REFERENCE DATA**

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<tr>
<th>DESCRIPTION</th>
<th>VALUE</th>
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<tr>
<td>Ceramic Dielectric</td>
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<td>Type</td>
<td>RD 030100 RD 045120</td>
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<tr>
<td>Voltage (V_p)</td>
<td>7000 8000 10 000 11 000</td>
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<tr>
<td>Min. Capacitance (pF)</td>
<td>1500 10 800 200</td>
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<td>Max. Capacitance (pF)</td>
<td>1500 1200 4700 3000</td>
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<tr>
<td>Mounting</td>
<td>Screw terminal</td>
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**DESCRIPTION VALUE**

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# SAP PART NUMBER AND ELECTRICAL DATA

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<tr>
<th>PART NUMBER</th>
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<th>RATED VOLTAGE (kVp)</th>
<th>RATED POWER (kvar)</th>
<th>RATED CURRENT (ARMS)</th>
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**Notes**

- **#** 14th to 15th digit: capacitance tolerance code ± 20 % = 38, ± 10 % = 36, ± 5 % = 33

(1) The surface temperature during operation must not exceed +100 °C
DIMENSIONS in millimeters (inches)

RD 030100

RD 045120

DERATING DIAGRAMS

RD030100BP101##BF1

RD030100BP121##BG1
DERATING DIAGRAMS

**RD030100BP161##BG1**
- $U_0$ (kV) vs $I_g$ (A RMS) vs $Q_g$ (kvar) vs $U_g$ (kV)
- Frequency (MHz): 0.01, 0.1, 1, 10, 100, 1000

**RD030100BP201##BG1**
- $U_0$ (kV) vs $I_g$ (A RMS) vs $Q_g$ (kvar) vs $U_g$ (kV)
- Frequency (MHz): 0.01, 0.1, 1, 10, 100, 1000

**RD030100BP251##BH1**
- $U_0$ (kV) vs $I_g$ (A RMS) vs $Q_g$ (kvar) vs $U_g$ (kV)
- Frequency (MHz): 0.01, 0.1, 1, 10, 100, 1000

**RD030100BP301##BH1**
- $U_0$ (kV) vs $I_g$ (A RMS) vs $Q_g$ (kvar) vs $U_g$ (kV)
- Frequency (MHz): 0.01, 0.1, 1, 10, 100, 1000

**RD030100BP401##BH1**
- $U_0$ (kV) vs $I_g$ (A RMS) vs $Q_g$ (kvar) vs $U_g$ (kV)
- Frequency (MHz): 0.01, 0.1, 1, 10, 100, 1000

**RD030100BP501##BH1**
- $U_0$ (kV) vs $I_g$ (A RMS) vs $Q_g$ (kvar) vs $U_g$ (kV)
- Frequency (MHz): 0.01, 0.1, 1, 10, 100, 1000
DERATING DIAGRAMS

**RD030100BP601##BJ1**

- **Ug (kVp)**: 0.25 MHz, 7.95 MHz
- **Ig (A RMS)**: 5 MHz, 100 MHz
- **Qg (kvar)**: 100 (kvar)

**RD030100BP801##BJ1**

- **Ug (kVp)**: 0.19 MHz, 5.96 MHz
- **Ig (A RMS)**: 5 MHz, 100 MHz
- **Qg (kvar)**: 100 (kvar)

**RD030100BP102##BJ1**

- **Ug (kVp)**: 0.15 MHz, 4.77 MHz
- **Ig (A RMS)**: 5 MHz, 100 MHz
- **Qg (kvar)**: 100 (kvar)

**RD030100BP122##BJ1**

- **Ug (kVp)**: 0.12 MHz, 3.98 MHz
- **Ig (A RMS)**: 5 MHz, 100 MHz
- **Qg (kvar)**: 100 (kvar)

**RD030100VY152##BJ1**

- **Ug (kVp)**: 0.13 MHz, 3.18 MHz
- **Ig (A RMS)**: 5 MHz, 100 MHz
- **Qg (kvar)**: 100 (kvar)

**RD045120WE201##BG1**

- **Ug (kVp)**: 0.79 MHz, 33.1 MHz
- **Ig (A RMS)**: 5 MHz, 100 MHz
- **Qg (kvar)**: 100 (kvar)
DERATING DIAGRAMS

RD045120WE251##BG1

RD045120WE301##BG1

RD045120WE401##BH1

RD045120WE501##BH1

RD045120WE601##BH1

RD045120BH801##BH1

For technical questions, contact: powcap@vishay.com

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<th>Description</th>
<th>Link</th>
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