RF Power Pot Capacitors with Mounting Tags, Class 1 Ceramic

FEATURES
- High reliability
- Multiple terminals
- Wide range of capacitance values

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

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 rim is additionally glazed.

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

CAPACITANCE RANGE
50 pF to 5.0 nF

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

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

INSULATION RESISTANCE
Min. 10 000 MΩ (at 25 °C)

QUICK REFERENCE DATA

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>VALUE</th>
</tr>
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<tbody>
<tr>
<td>Ceramic Class</td>
<td>1</td>
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<tr>
<td>Ceramic Dielectric</td>
<td>R7, R16, R42, R85, R7, R42, R85, R7, R16, R42, R85, R230</td>
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<tr>
<td>Type</td>
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<tr>
<td>Voltage (V_p)</td>
<td>9000</td>
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<tr>
<td>Min. Capacitance (pF)</td>
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<tr>
<td>Max. Capacitance (pF)</td>
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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
- 9.0 kV_p
- 10.0 kV_p
- 11.0 kV_p
- 12.0 kV_p
- 13.0 kV_p
- 14.0 kV_p

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)

OPERATING TEMPERATURE RANGE
-55 °C to +100 °C
# SAP PART NUMBER AND ELECTRICAL DATA

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>CERAMIC</th>
<th>CAP. VALUES (pF)</th>
<th>RATED VOLTAGE (kVp)</th>
<th>RATED POWER (kvar)</th>
<th>RATED CURRENT (ARMS)</th>
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</tbody>
</table>

Notes
- # 2nd digit: code letter of the terminal version A, B, C, D, E
- # # 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)

### Table

<table>
<thead>
<tr>
<th>Type</th>
<th>T. 045090</th>
<th>T. 045120</th>
<th>T. 045150</th>
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</thead>
<tbody>
<tr>
<td>Length L₁</td>
<td>90 (3.54)</td>
<td>120 (4.72)</td>
<td>150 (5.91)</td>
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<tr>
<td>Length L₂</td>
<td>45 ± 2 (1.77 ± 0.08)</td>
<td>60 ± 2 (2.36 ± 0.08)</td>
<td>75 ± 2 (2.95 ± 0.08)</td>
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<tr>
<td>Length L₃</td>
<td>96 ± 2 (3.78 ± 0.08)</td>
<td>126 ± 2 (4.96 ± 0.08)</td>
<td>156 ± 2 (6.14 ± 0.08)</td>
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<tr>
<td>Length L₄</td>
<td>97 (3.82)</td>
<td>127 (5.00)</td>
<td>157 (6.18)</td>
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<tr>
<td>Length L₅</td>
<td>92 ± 2 (3.62 ± 0.08)</td>
<td>122 ± 2 (4.80 ± 0.08)</td>
<td>152 ± 2 (5.98 ± 0.08)</td>
</tr>
</tbody>
</table>

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### DERATING DIAGRAMS

#### T#045090BH600##BF1

- **U<sub>I</sub> (kV<sub>p</sub>)** vs **Frequency (MHz)**
  - 100
  - 10
  - 1
  - 0.1

#### T#045090BH800##BF1

- **U<sub>I</sub> (kV<sub>p</sub>)** vs **Frequency (MHz)**
  - 100
  - 10
  - 1
  - 0.1

#### T#045090BH101##BF1

- **U<sub>I</sub> (kV<sub>p</sub>)** vs **Frequency (MHz)**
  - 100
  - 10
  - 1
  - 0.1

#### T#045090BH161##BF1

- **U<sub>I</sub> (kV<sub>p</sub>)** vs **Frequency (MHz)**
  - 100
  - 10
  - 1
  - 0.1

#### T#045090BH201##BG1

- **U<sub>I</sub> (kV<sub>p</sub>)** vs **Frequency (MHz)**
  - 100
  - 10
  - 1
  - 0.1

#### T#045090BH251##BG1

- **U<sub>I</sub> (kV<sub>p</sub>)** vs **Frequency (MHz)**
  - 100
  - 10
  - 1
  - 0.1

#### T#045090BH301##BG1

- **U<sub>I</sub> (kV<sub>p</sub>)** vs **Frequency (MHz)**
  - 100
  - 10
  - 1
  - 0.1

#### T#045090BH401##BH1

- **U<sub>I</sub> (kV<sub>p</sub>)** vs **Frequency (MHz)**
  - 100
  - 10
  - 1
  - 0.1

### Parameters

- **U<sub>I</sub> (kV<sub>p</sub>)**
- **Q<sub>G</sub> (kvar)**
- **I<sub>I</sub> (A<sub>ave</sub>)**

**Frequencies:**
- 17.14 MHz
- 1.17 MHz
- 0.87 MHz
- 0.70 MHz
- 0.44 MHz
- 0.35 MHz
- 0.28 MHz
- 0.23 MHz
- 0.22 MHz

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### DERATING DIAGRAMS

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>T#045120WH801##BJ1</td>
<td>0.08 MHz, 0.57 MHz</td>
</tr>
<tr>
<td>T#045120WH102##BJ1</td>
<td>0.07 MHz, 0.45 MHz</td>
</tr>
<tr>
<td>T#045150WJ600##BF1</td>
<td>0.95 MHz, 10.0 MHz</td>
</tr>
<tr>
<td>T#045150WJ301##BH1</td>
<td>0.23 MHz, 1.82 MHz</td>
</tr>
</tbody>
</table>

**Ug (kVp)**

- 0.1
- 1
- 10
- 0.001
- 0.01
- 0.1
- 10

**Qg (kvar)**

- 0.1
- 1
- 10
- 0.001
- 0.01
- 0.1
- 10

**Ig (A rms)**

- 0.1
- 1
- 10
- 0.001
- 0.01
- 0.1
- 10

**Frequency (MHz)**

- 0.001
- 0.01
- 0.1
- 1
- 10

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**DERATING DIAGRAMS**

**T#045150WH401##BH1**

- **Ug (kVp)**
- **Qg (kvar)**
- **Ig (ARM)**

- **Frequency (MHz):** 0.20 MHz, 1.36 MHz

**T#045150WH501##BH1**

- **Ug (kVp)**
- **Qg (kvar)**
- **Ig (ARM)**

- **Frequency (MHz):** 0.16 MHz, 1.09 MHz

**T#045150WH601##BH1**

- **Ug (kVp)**
- **Qg (kvar)**
- **Ig (ARM)**

- **Frequency (MHz):** 0.13 MHz, 0.91 MHz

**T#045150WF202##BJ1**

- **Ug (kVp)**
- **Qg (kvar)**
- **Ig (ARM)**

- **Frequency (MHz):** 0.05 MHz, 0.27 MHz

**T#045150WJ801##BJ1**

- **Ug (kVp)**
- **Qg (kvar)**
- **Ig (ARM)**

- **Frequency (MHz):** 0.09 MHz, 0.68 MHz

**T#045150WH102##BJ1**

- **Ug (kVp)**
- **Qg (kvar)**
- **Ig (ARM)**

- **Frequency (MHz):** 0.08 MHz, 0.55 MHz

**T#045150WF302##BK1**

- **Ug (kVp)**
- **Qg (kvar)**
- **Ig (ARM)**

- **Frequency (MHz):** 0.02 MHz, 0.18 MHz
## DERATING DIAGRAMS

<table>
<thead>
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<th>T#045150WJ402##BK1</th>
<th>T#045150WE502##BK1</th>
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<td><img src="image1.png" alt="Diagram 1" /></td>
<td><img src="image2.png" alt="Diagram 2" /></td>
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### RELATED DOCUMENTS

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