

## 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

| QUICK REFERENCE DATA      |  |        |        |  |        |        |        |  |        |        |  |
|---------------------------|--|--------|--------|--|--------|--------|--------|--|--------|--------|--|
| DESCRIPTION               | VALUE  |        |        |  |        |        |        |  |        |        |  |
| Ceramic Class             | 1  |        |        |  |        |        |        |  |        |        |  |
| Ceramic Dielectric        | R7, R16, R42, R85, R230                                  |        |        |  |        |        |        |  |        |        |  |
| Type                      | TA 045090, TB 045090, TC 045090,<br>TD 045090, TE 045090 |        |        | TA 045120, TB 045120, TC 045120,<br>TD 045120, TE 045120 |        |        |        | TA 045150, TB 045150, TC 045150,<br>TD 045150, TE 045150 |        |        |  |
| Voltage (V <sub>p</sub> ) | 9000   | 10 000 | 10 000 | 11 000   | 12 000 | 13 000 | 11 000 | 12 000   | 13 000 | 14 000 |  |
| Min. Capacitance (pF)     | 2500   | 60     | 1600   | 160  | 80     | 50     | 5000   | 2000   | 400    | 60     |  |
| Max. Capacitance (pF)     | 2500   | 1600   | 1600   | 500  | 100    | 1000   | 5000   | 2000   | 1600   | 4000   |  |
| Mounting                  | Screw terminal   |        |        |  |        |        |        |  |        |        |  |

### 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. 100 000 MΩ (at 25 °C)

### 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<sub>p</sub>
- 10.0 kV<sub>p</sub>
- 11.0 kV<sub>p</sub>
- 12.0 kV<sub>p</sub>
- 13.0 kV<sub>p</sub>
- 14.0 kV<sub>p</sub>

### 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

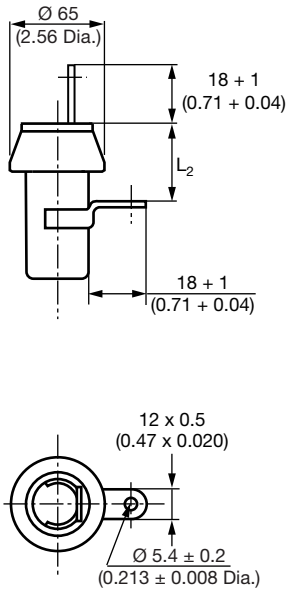
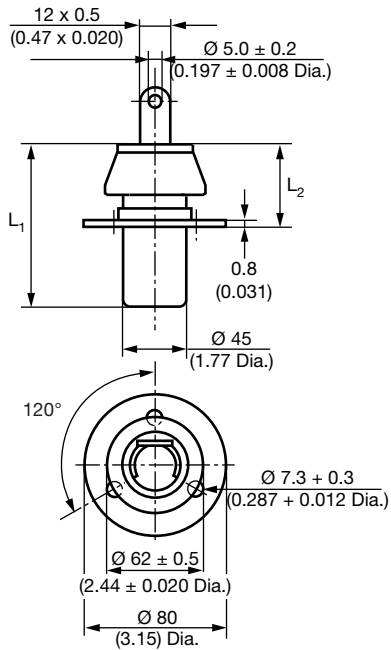
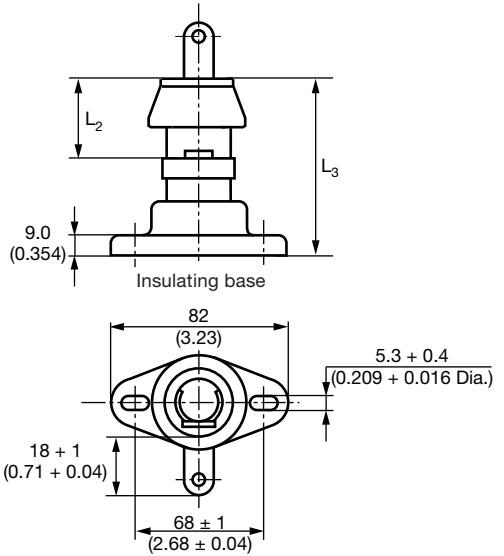
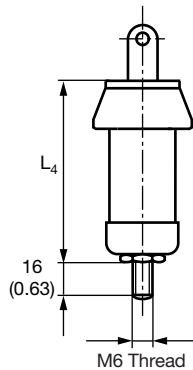
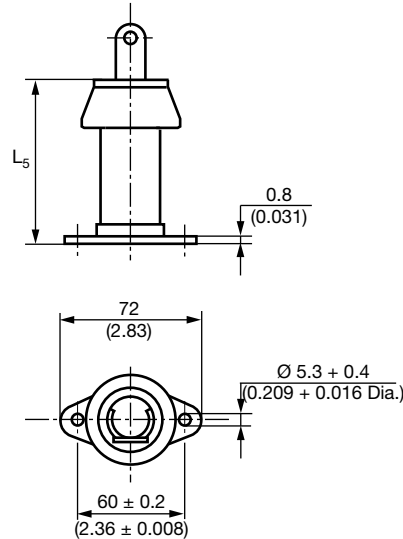


| SAP PART NUMBER AND ELECTRICAL DATA |         |                  |                                  |                                   |                                   |    |
|-------------------------------------|---------|------------------|----------------------------------|-----------------------------------|-----------------------------------|----|
| PART NUMBER                         | CERAMIC | CAP. VALUES (pF) | RATED VOLTAGE (kV <sub>p</sub> ) | RATED POWER <sup>(1)</sup> (kvar) | RATED CURRENT (A <sub>rms</sub> ) |    |
| <b>TYPE T. 045090</b>               |         |                  |                                  |                                   |                                   |    |
| T#045090BH600##BF1                  | R7      | 60               | 10                               | 22                                | 12                                |    |
| T#045090BH800##BF1                  |         | 80               |                                  |                                   |                                   |    |
| T#045090BH101##BF1                  |         | 100              |                                  |                                   |                                   |    |
| T#045090BH161##BF1                  |         | 160              |                                  |                                   |                                   |    |
| T#045090BH201##BG1                  | R16     | 200              |                                  |                                   |                                   |    |
| T#045090BH251##BG1                  |         | 250              |                                  |                                   |                                   |    |
| T#045090BH301##BG1                  |         | 300              |                                  |                                   |                                   |    |
| T#045090BH401##BH1                  | R42     | 400              |                                  |                                   |                                   |    |
| T#045090BH501##BH1                  |         | 500              |                                  |                                   |                                   |    |
| T#045090BH601##BH1                  |         | 600              |                                  |                                   |                                   |    |
| T#045090BH801##BJ1                  | R85     | 800              |                                  | 9.0                               |                                   | 28 |
| T#045090BH102##BJ1                  |         | 1000             |                                  |                                   |                                   |    |
| T#045090BH162##BJ1                  |         | 1600             |                                  |                                   |                                   |    |
| T#045090WC252##BJ1                  |         | 2500             |                                  |                                   |                                   |    |
|                                     |         |                  |                                  |                                   |                                   |    |
| <b>TYPE T. 045120</b>               |         |                  |                                  |                                   |                                   |    |
| T#045120WH500##BF1                  | R7      | 50               | 13                               | 28                                | 10                                |    |
| T#045120WH600##BF1                  |         | 60               | 12                               |                                   |                                   |    |
| T#045120WF800##BF1                  |         | 80               |                                  |                                   |                                   |    |
| T#045120WF101##BF1                  |         | 100              |                                  |                                   |                                   |    |
| T#045120WE161##BF1                  |         | 160              | 11                               |                                   |                                   |    |
| T#045120WH251##BH1                  | R42     | 250              | 13                               |                                   |                                   |    |
| T#045120WH301##BH1                  |         | 300              |                                  |                                   |                                   |    |
| T#045120WH401##BH1                  |         | 400              |                                  |                                   |                                   |    |
| T#045120WE501##BH1                  |         | 500              |                                  | 11                                |                                   |    |
| T#045120WH601##BJ1                  | R85     | 600              | 13                               | 35                                |                                   |    |
| T#045120WH801##BJ1                  |         | 800              |                                  |                                   |                                   |    |
| T#045120WH102##BJ1                  |         | 1000             |                                  |                                   |                                   |    |
| T#045120BH162##BJ1                  |         | 1600             |                                  |                                   |                                   | 10 |
|                                     |         |                  |                                  |                                   |                                   |    |
| <b>TYPE T. 045150</b>               |         |                  |                                  |                                   |                                   |    |
| T#045150WJ600##BF1                  | R7      | 60               | 14                               | 35                                | 12                                |    |
| T#045150WJ800##BF1                  |         | 80               |                                  |                                   |                                   |    |
| T#045150WJ101##BF1                  |         | 100              |                                  |                                   |                                   |    |
| T#045150WJ201##BG1                  | R16     | 200              |                                  |                                   |                                   |    |
| T#045150WJ301##BH1                  | R42     | 300              |                                  |                                   |                                   | 13 |
| T#045150WH401##BH1                  |         | 400              |                                  |                                   |                                   |    |
| T#045150WH501##BH1                  |         | 500              |                                  |                                   |                                   |    |
| T#045150WH601##BH1                  |         | 600              |                                  |                                   |                                   |    |
| T#045150WJ801##BJ1                  | R85     | 800              | 14                               | 42                                |                                   |    |
| T#045150WH102##BJ1                  |         | 1000             | 13                               |                                   |                                   |    |
| T#045150WH162##BJ1                  |         | 1600             |                                  |                                   |                                   |    |
| T#045150WF202##BJ1                  |         | 2000             |                                  |                                   |                                   |    |
| T#045150WJ302##BK1                  |         | R230             | 3000                             |                                   |                                   | 12 |
| T#045150WJ402##BK1                  | 4000    |                  | 14                               |                                   |                                   |    |
| T#045150WE502##BK1                  | 5000    |                  | 11                               |                                   |                                   |    |

**Notes**

- # 2<sup>nd</sup> digit: code letter of the terminal version A, B, C, D, E
- ## 14<sup>th</sup> to 15<sup>th</sup> digit: capacitance tolerance code  $\pm 20\% = 38$ ,  $\pm 10\% = 36$ ,  $\pm 5\% = 33$
- (1) The surface temperature during operation must not exceed +100 °C

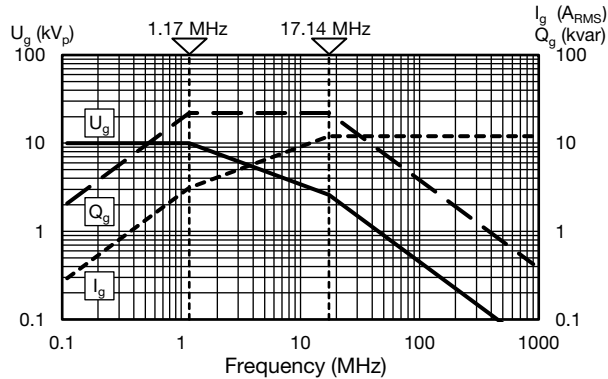
**DIMENSIONS** in millimeters (inches)

**TA**

**TB**

**TC**

**TD**

**TE**


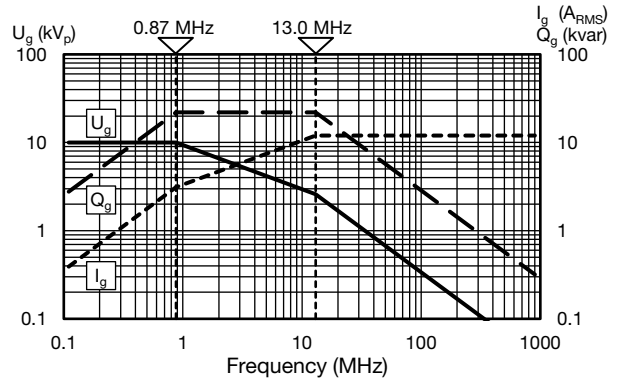
| TYPE                  | T. 045090            | T. 045120             | T. 045150             |
|-----------------------|----------------------|-----------------------|-----------------------|
| Length L <sub>1</sub> | 90 (3.54)            | 120 (4.72)            | 150 (5.91)            |
| Length L <sub>2</sub> | 45 ± 2 (1.77 ± 0.08) | 60 ± 2 (2.36 ± 0.08)  | 75 ± 2 (2.95 ± 0.08)  |
| Length L <sub>3</sub> | 96 ± 2 (3.78 ± 0.08) | 126 ± 2 (4.96 ± 0.08) | 156 ± 2 (6.14 ± 0.08) |
| Length L <sub>4</sub> | 97 (3.82)            | 127 (5.00)            | 157 (6.18)            |
| Length L <sub>5</sub> | 92 ± 2 (3.62 ± 0.08) | 122 ± 2 (4.80 ± 0.08) | 152 ± 2 (5.98 ± 0.08) |

**DERATING DIAGRAMS**

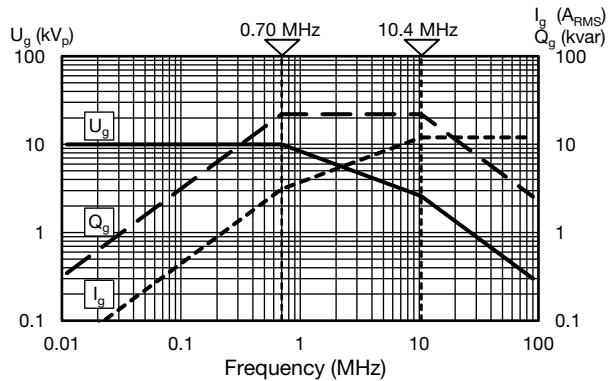
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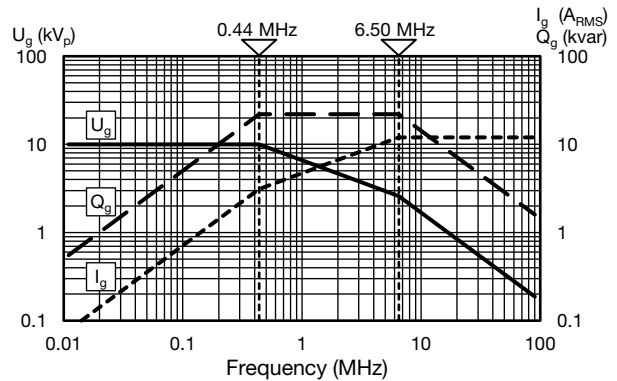
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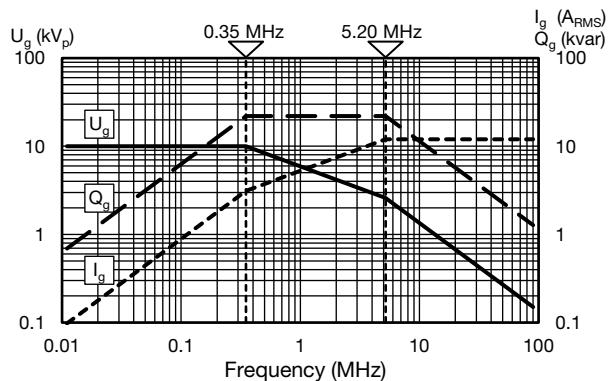
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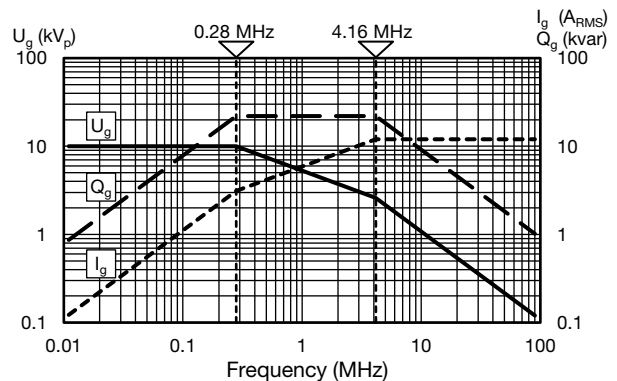
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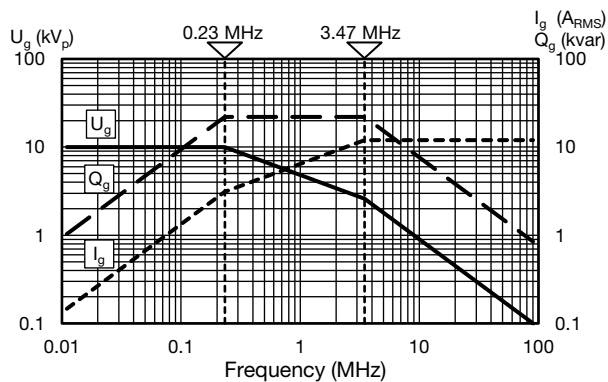
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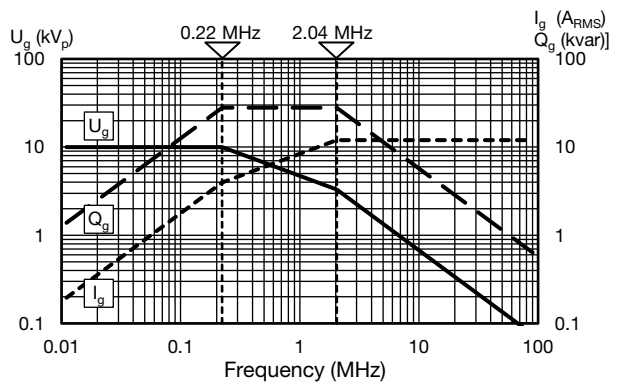
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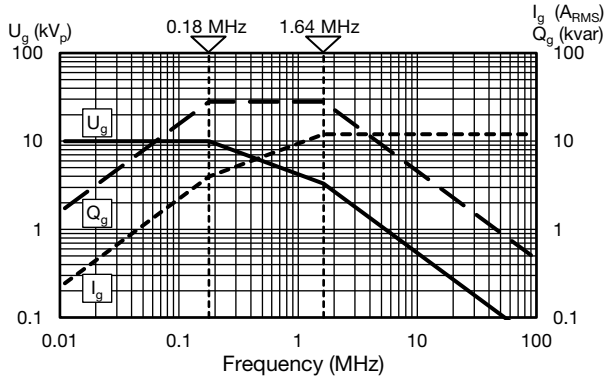
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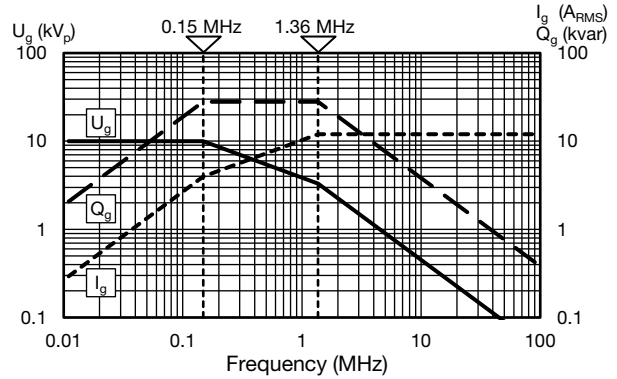


DERATING DIAGRAMS

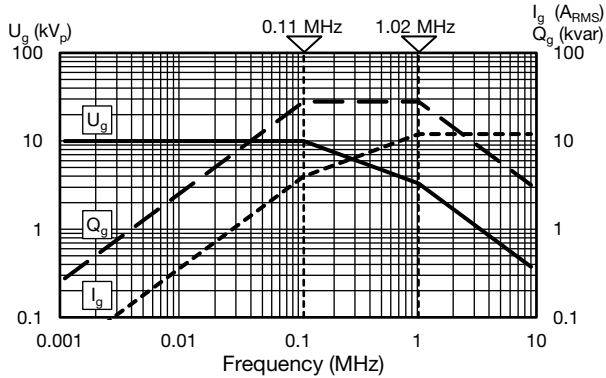
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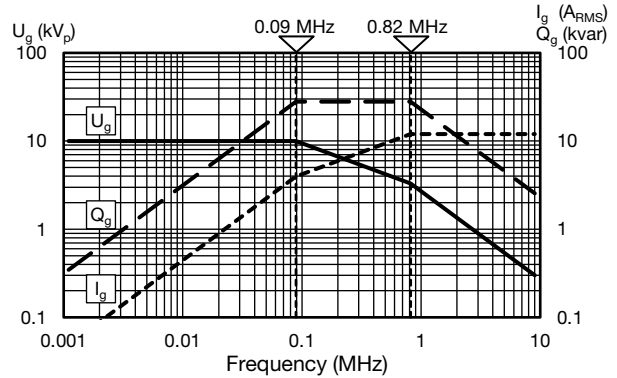
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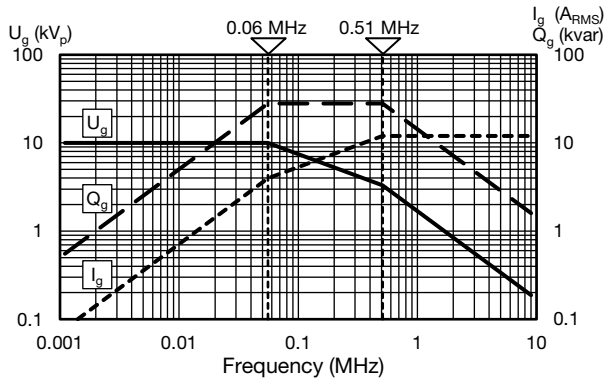
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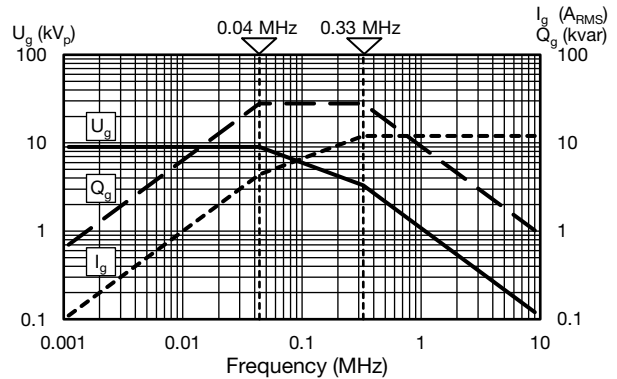
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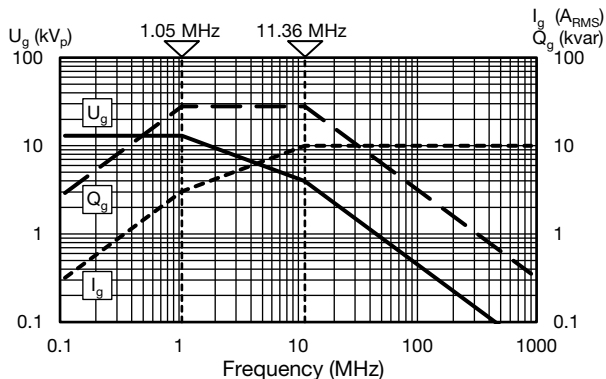
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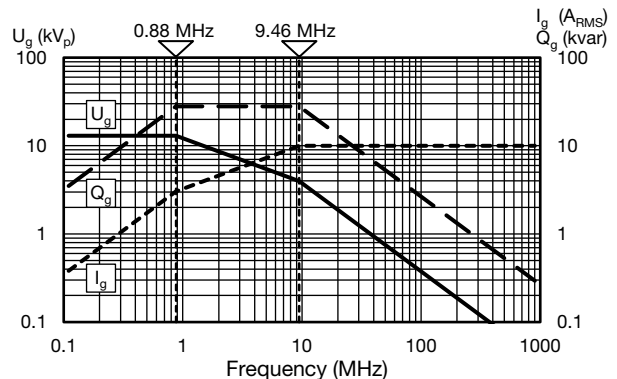
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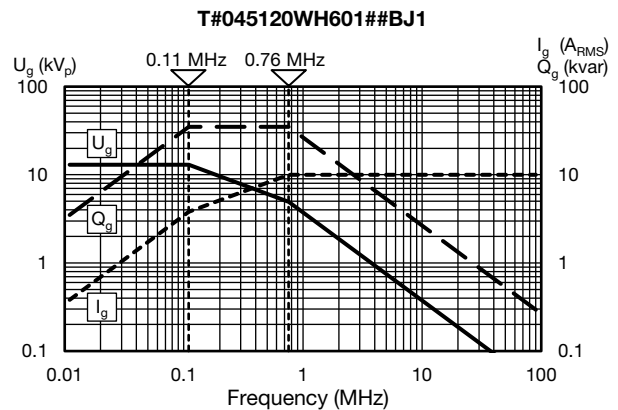
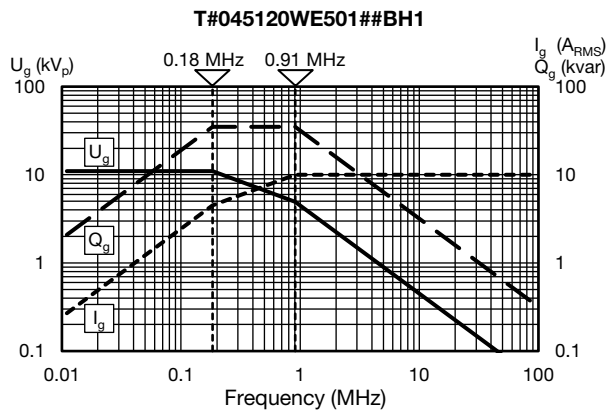
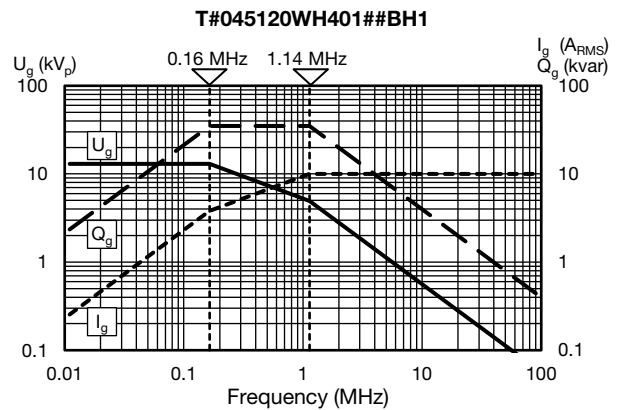
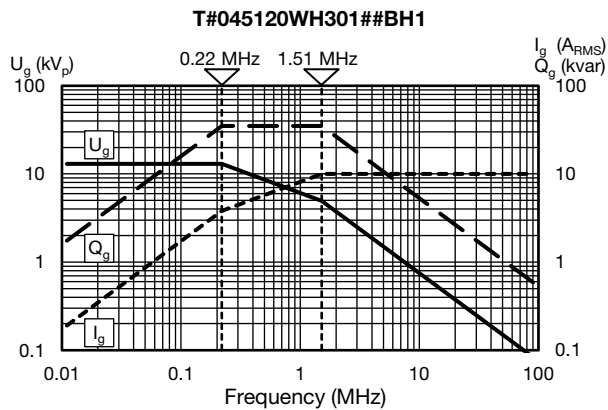
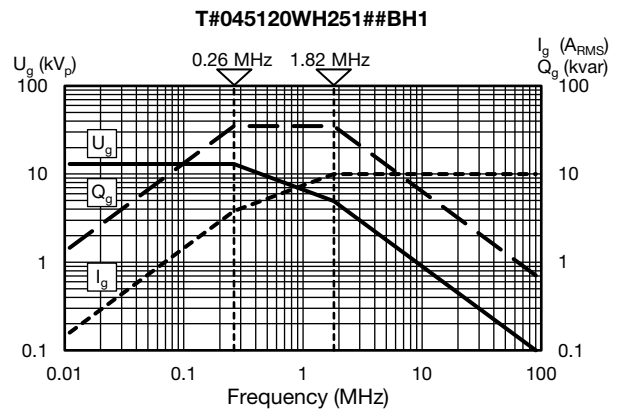
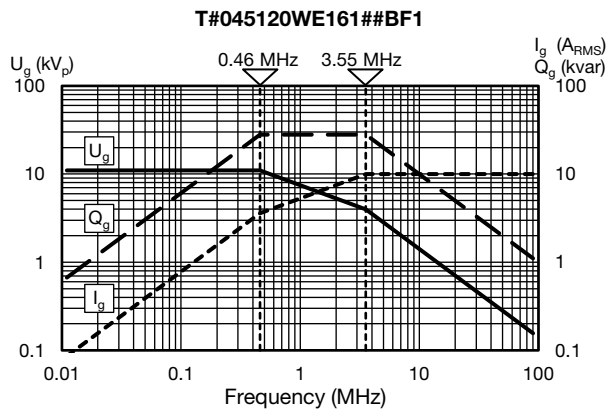
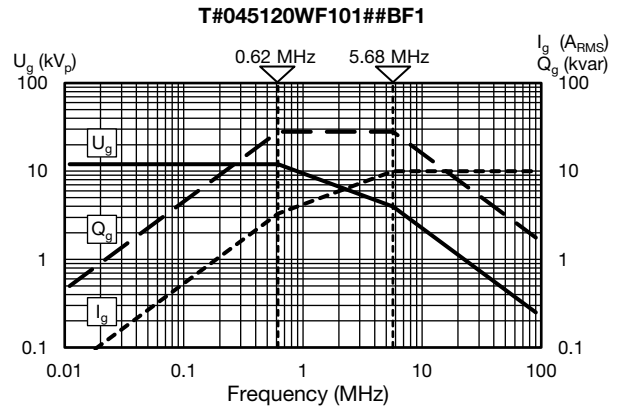
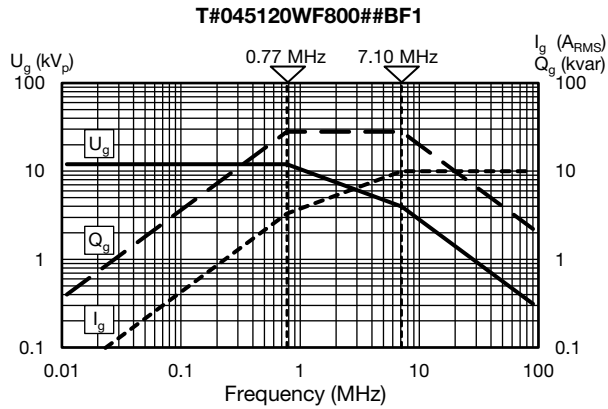


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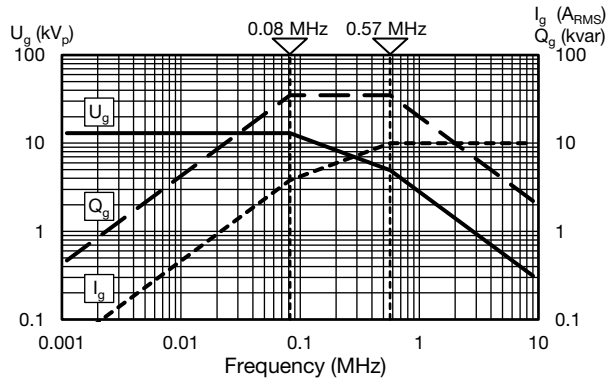
DERATING DIAGRAMS



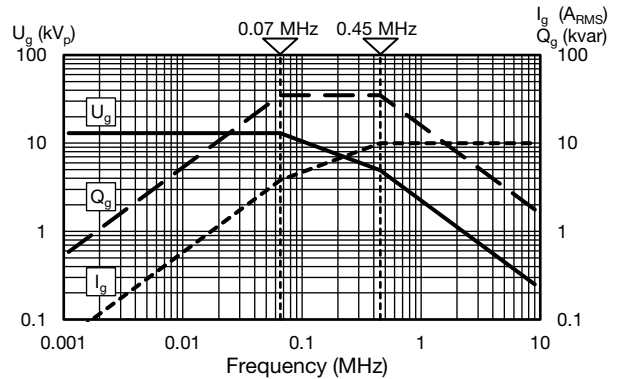


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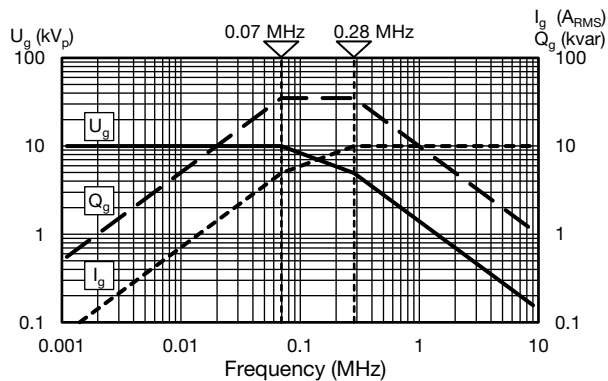
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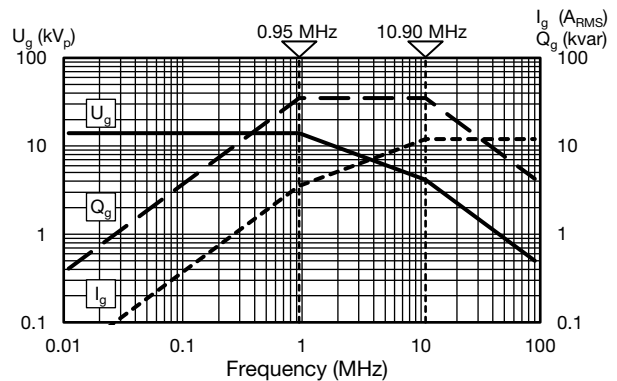
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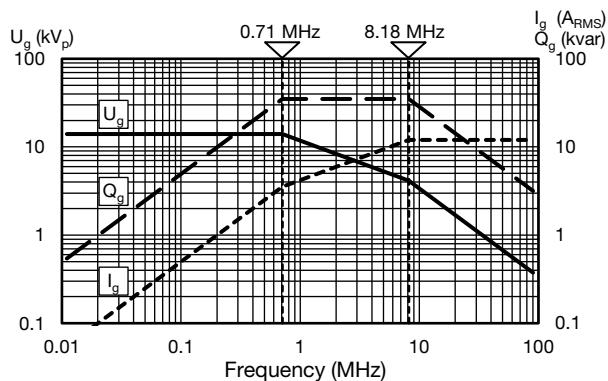
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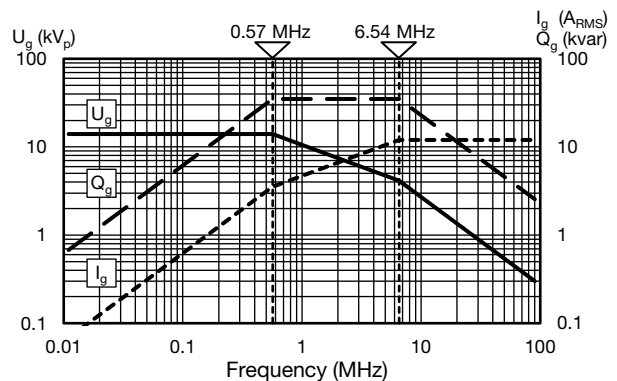
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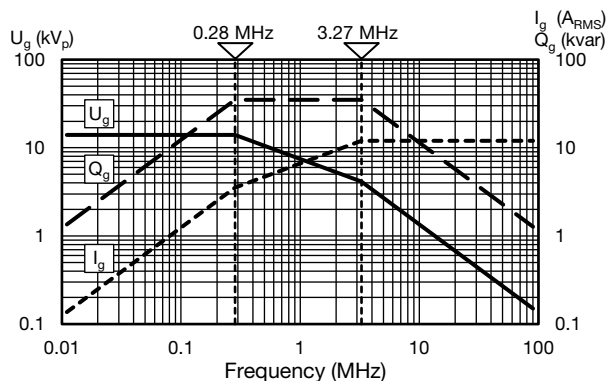
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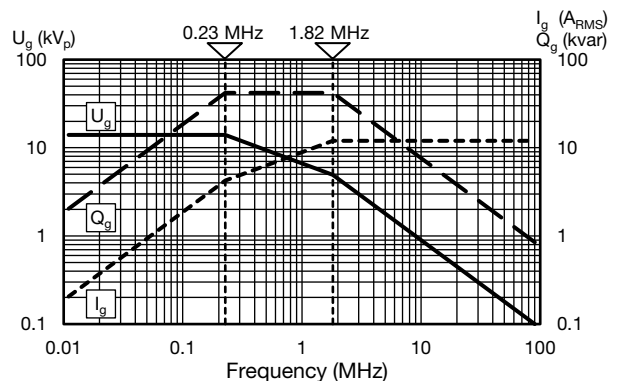
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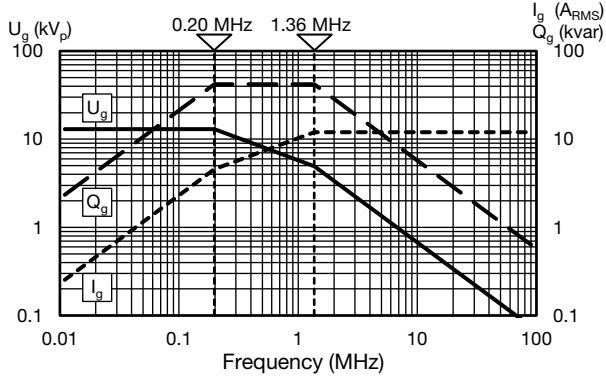




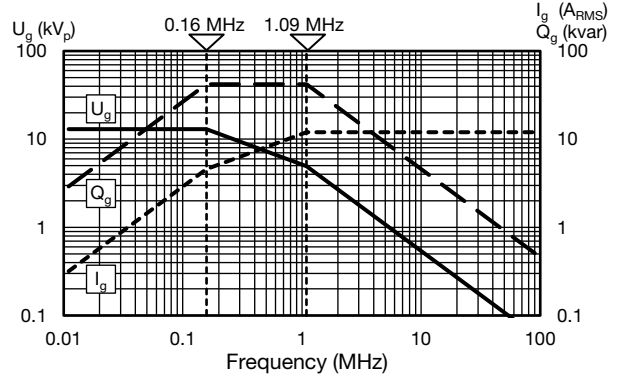


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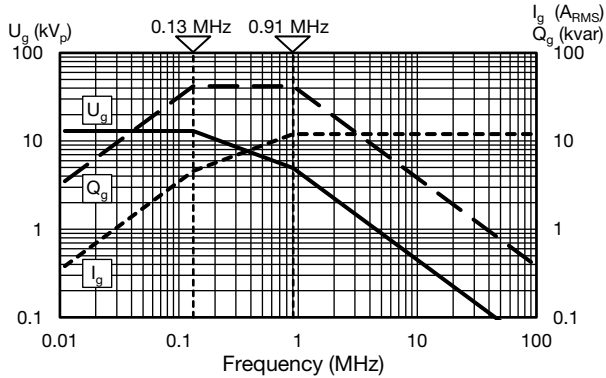
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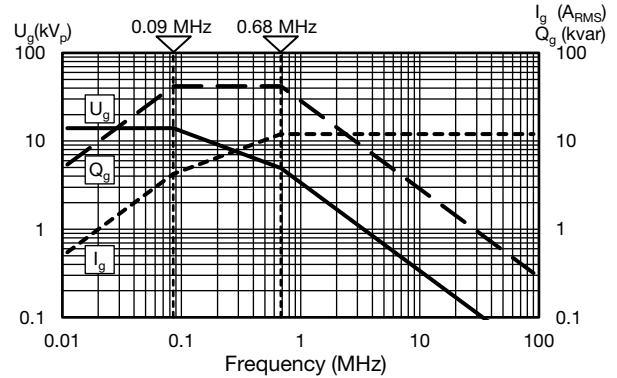
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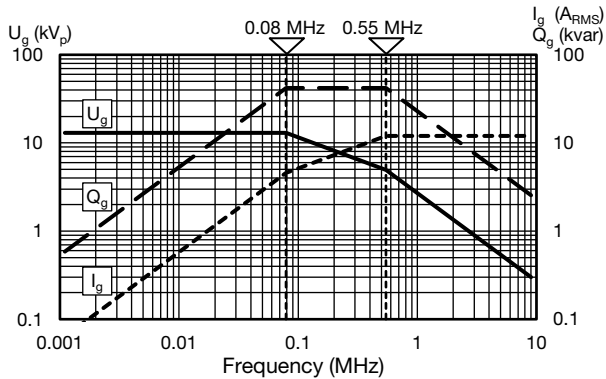
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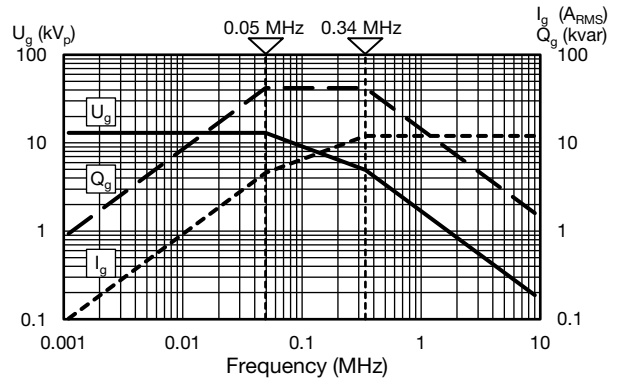
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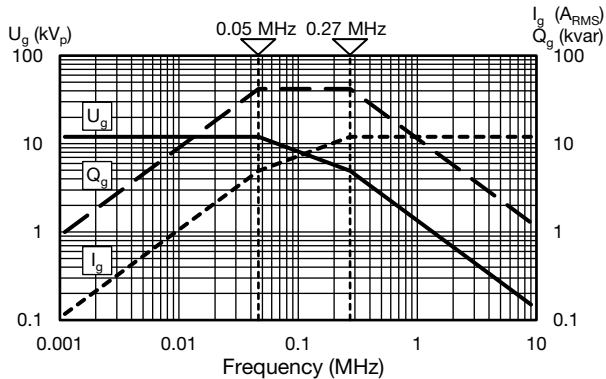
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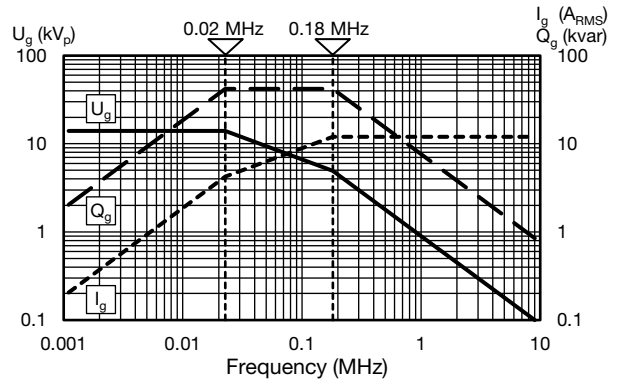
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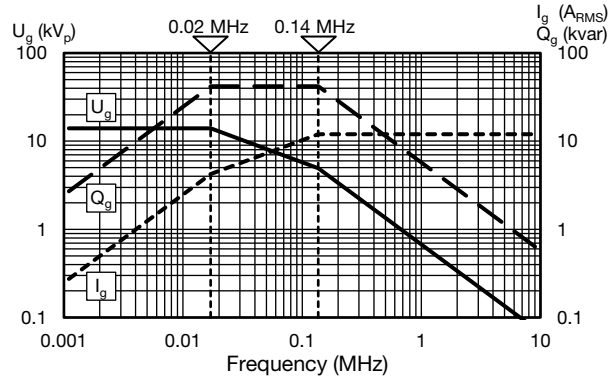




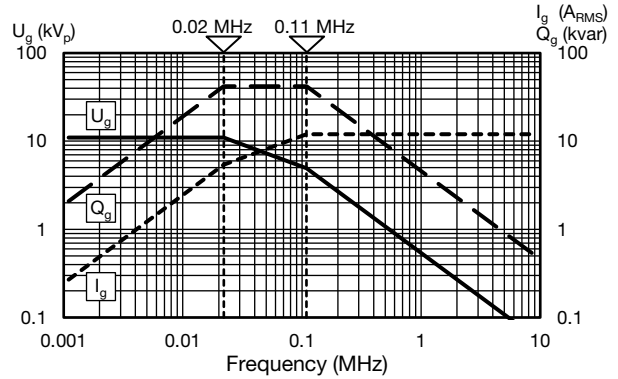


**DERATING DIAGRAMS**

**T#045150WJ402##BK1**



**T#045150WE502##BK1**





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**Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.**

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