

## RF Power Pot Capacitors with Mounting Tags, Class 1 Ceramic



### FEATURES

- Small size
- High reliability
- 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                             |      |      |   |      |   |      |
| Type                      | TA 020030, TB 020030,<br>TD 020030, TE 020030 |      |      | TA 020050, TB 020050,<br>TD 020050, TE 020050 |      | TA 020080, TB 020080,<br>TD 020080, TE 020080 |      |
| Voltage (V <sub>p</sub> ) | 6000  | 7000 | 8000 | 7000  | 8000 | 7000  | 8000 |
| Min. Capacitance (pF)     | 100   | 80   | 10   | 200   | 20   | 1200  | 40   |
| Max. Capacitance (pF)     | 400   | 250  | 160  | 600   | 500  | 1200  | 1000 |
| 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

10 pF to 1.2 nF

### CAPACITANCE TOLERANCE

± 20 %; ± 10 %; ± 5 %

### DIELECTRIC STRENGTH TEST

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

### CERAMIC DIELECTRICS

- R7 (TCC + 100 ppm/K)
- R16 (TCC + 100 ppm/K)
- R42 (TCC - 250 ppm/K)
- R85 (TCC - 750 ppm/K)

### RATED VOLTAGE

- 6.0 kV<sub>p</sub>
- 7.0 kV<sub>p</sub>
- 8.0 kV<sub>p</sub>

### DISSIPATION FACTOR

R7: max. 0.07 %  
R16: max. 0.04 %  
R42, R85: 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

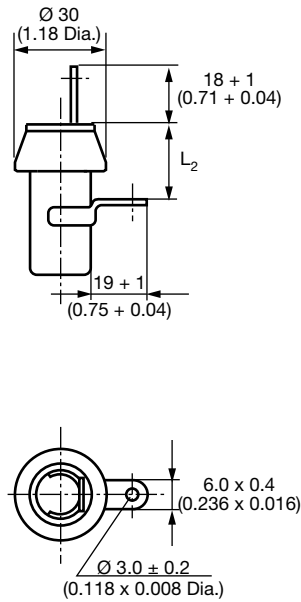
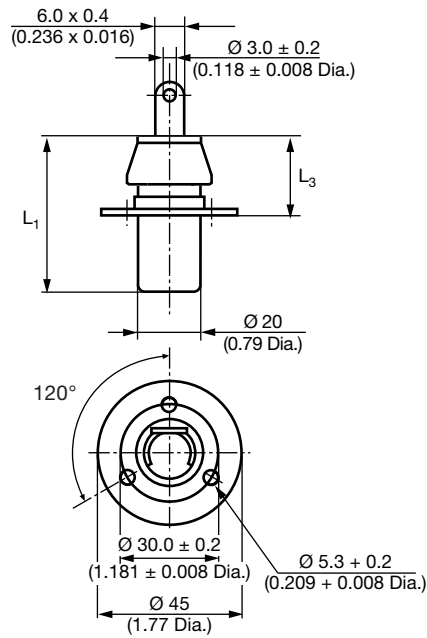
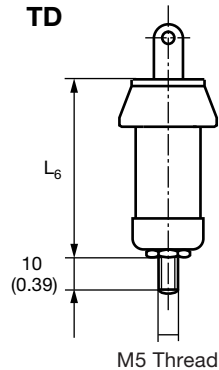
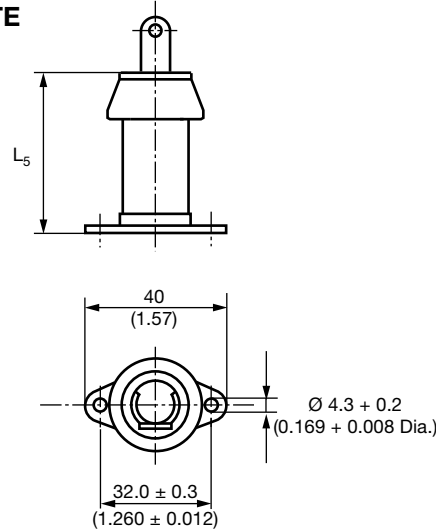


| SAP PART NUMBER AND ELECTRICAL DATA |         |                  |                                  |                                   |                                   |
|-------------------------------------|---------|------------------|----------------------------------|-----------------------------------|-----------------------------------|
| 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. 020030</b>               |         |                  |                                  |                                   |                                   |
| T#020030BP100##BF1                  | R7      | 10               | 8.0                              | 3.5                               | 6.0                               |
| T#020030BP160##BF1                  |         | 16               |                                  |                                   |                                   |
| T#020030BP200##BF1                  |         | 20               |                                  |                                   |                                   |
| T#020030BP250##BG1                  | R16     | 25               |                                  |                                   |                                   |
| T#020030BP400##BG1                  |         | 40               |                                  |                                   |                                   |
| T#020030BP500##BH1                  | R42     | 50               |                                  | 7.0                               |                                   |
| T#020030BP600##BH1                  |         | 60               |                                  |                                   |                                   |
| T#020030VY800##BH1                  |         | 80               |                                  |                                   |                                   |
| T#020030BF101##BH1                  |         | 100              |                                  |                                   |                                   |
| T#020030BP121##BJ1                  | R85     | 120              | 8.0                              |                                   |                                   |
| T#020030BP161##BJ1                  |         | 160              |                                  |                                   |                                   |
| T#020030VY201##BJ1                  |         | 200              |                                  |                                   |                                   |
| T#020030VY251##BJ1                  |         | 250              |                                  |                                   |                                   |
| T#020030BF301##BJ1                  |         | 300              |                                  |                                   |                                   |
| T#020030BF401##BJ1                  |         | 400              |                                  |                                   |                                   |
| <b>TYPE T. 020050</b>               |         |                  |                                  |                                   |                                   |
| T#020050BP200##BF1                  | R7      | 20               | 8.0                              | 5.6                               | 6.0                               |
| T#020050BP250##BF1                  |         | 25               |                                  |                                   |                                   |
| T#020050BP400##BG1                  | R16     | 40               |                                  |                                   |                                   |
| T#020050BP500##BG1                  |         | 50               |                                  |                                   |                                   |
| T#020050BP600##BG1                  |         | 60               |                                  |                                   |                                   |
| T#020050BP800##BG1                  |         | 80               |                                  |                                   |                                   |
| T#020050BP101##BH1                  | R42     | 100              | 7.0                              |                                   |                                   |
| T#020050BP161##BH1                  |         | 160              |                                  |                                   |                                   |
| T#020050VY201##BH1                  |         | 200              |                                  |                                   |                                   |
| T#020050BP251##BJ1                  | R85     | 250              | 8.0                              | 7.0                               |                                   |
| T#020050BP301##BJ1                  |         | 300              |                                  |                                   |                                   |
| T#020050BP401##BJ1                  |         | 400              |                                  |                                   |                                   |
| T#020050BP501##BJ1                  |         | 500              |                                  |                                   |                                   |
| T#020050VY601##BJ1                  |         | 600              |                                  |                                   |                                   |
| T#020050VY601##BJ1                  |         | 600              |                                  |                                   |                                   |
| <b>TYPE T. 020080</b>               |         |                  |                                  |                                   |                                   |
| T#020080BP400##BF1                  | R7      | 40               | 8.0                              | 8.5                               | 7.0                               |
| T#020080BP600##BF1                  |         | 60               |                                  |                                   |                                   |
| T#020080BP800##BG1                  | R16     | 80               |                                  |                                   |                                   |
| T#020080BP101##BG1                  |         | 100              |                                  |                                   |                                   |
| T#020080BP121##BG1                  |         | 120              |                                  |                                   |                                   |
| T#020080BP161##BG1                  |         | 160              |                                  |                                   |                                   |
| T#020080BP201##BH1                  | R42     | 200              |                                  | 10.5                              |                                   |
| T#020080BP251##BH1                  |         | 250              |                                  |                                   |                                   |
| T#020080BP301##BH1                  |         | 300              |                                  |                                   |                                   |
| T#020080BP401##BJ1                  | R85     | 400              |                                  |                                   |                                   |
| T#020080BP501##BJ1                  |         | 500              |                                  |                                   |                                   |
| T#020080BP601##BJ1                  |         | 600              |                                  |                                   |                                   |
| T#020080BP102##BJ1                  |         | 1000             |                                  |                                   |                                   |
| T#020080VY122##BJ1                  |         | 1200             |                                  |                                   |                                   |
|                                     |         |                  | 7.0                              |                                   |                                   |

**Notes**

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

**DIMENSIONS** in millimeters (inches)

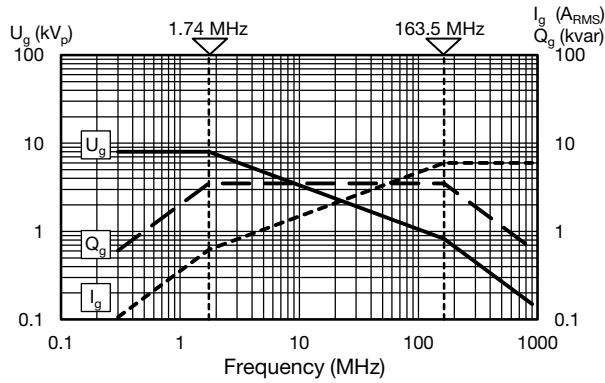
**TA**

**TB**

**TD**

**TE**


| TYPE         | T. 020030                  | T. 020050                  | T. 020080                  |
|--------------|----------------------------|----------------------------|----------------------------|
| Length $L_1$ | 30 (1.18)                  | 50 (1.97)                  | 80 (3.15)                  |
| Length $L_2$ | 15.0 ± 1.5 (0.591 ± 0.059) | 25.0 ± 2.0 (0.984 ± 0.079) | 40.0 ± 2.0 (1.575 ± 0.079) |
| Length $L_3$ | 20.0 ± 1.5 (0.787 ± 0.059) | 25.0 ± 2.0 (0.984 ± 0.079) | 40.0 ± 2.0 (1.575 ± 0.079) |
| Length $L_5$ | 31.0 ± 2.0 (1.220 ± 0.079) | 51.0 ± 2.0 (2.008 ± 0.079) | 81.0 ± 2.0 (3.189 ± 0.079) |
| Length $L_6$ | 36 (1.42)                  | 56 (2.20)                  | 86 (3.39)                  |

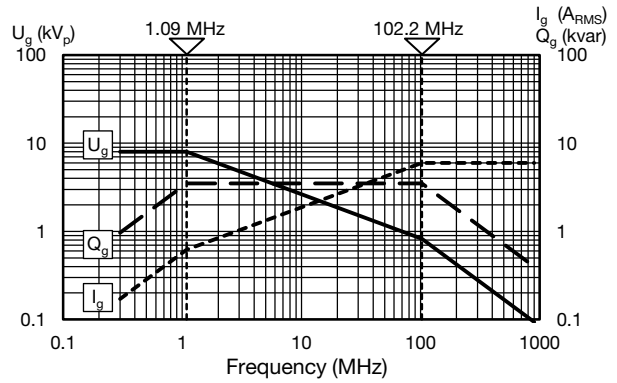


DERATING DIAGRAMS

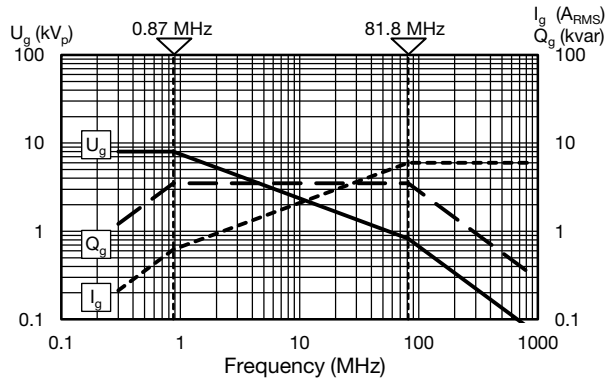
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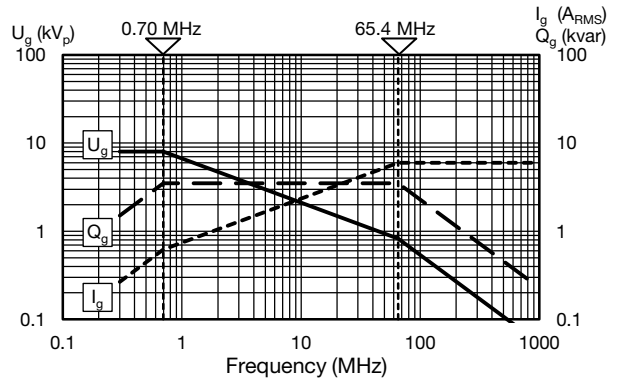
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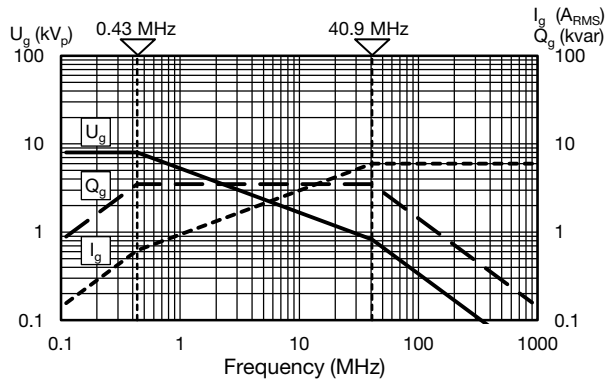
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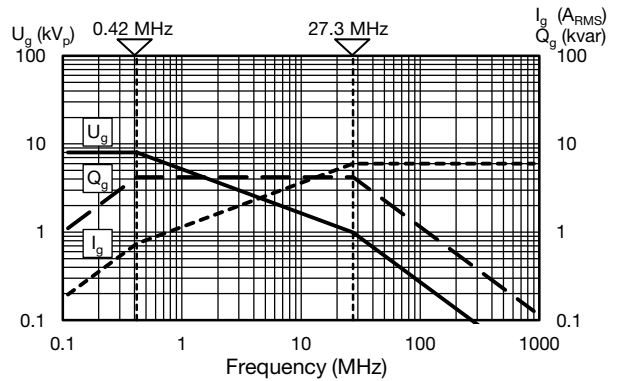
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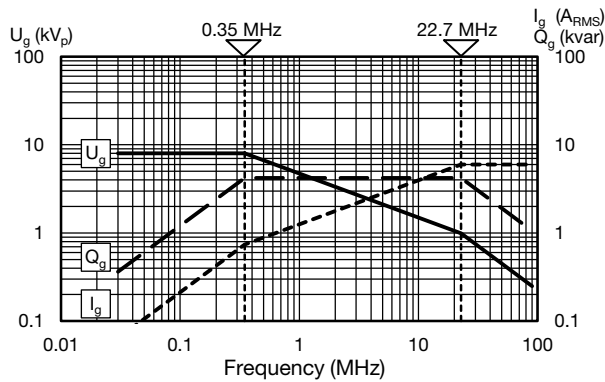
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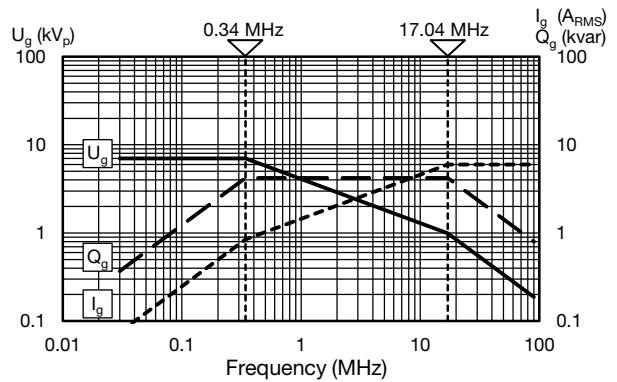
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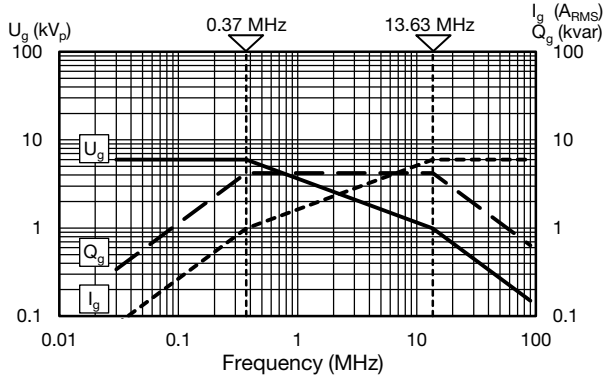
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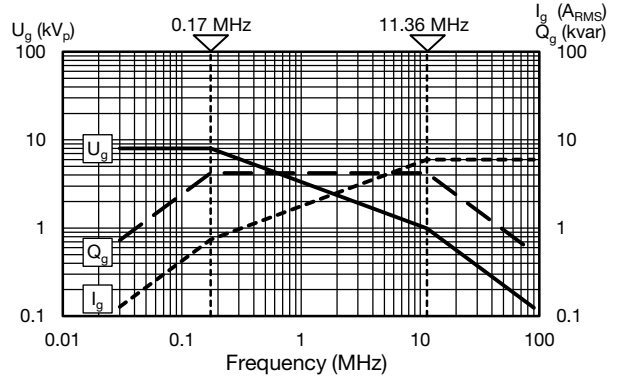


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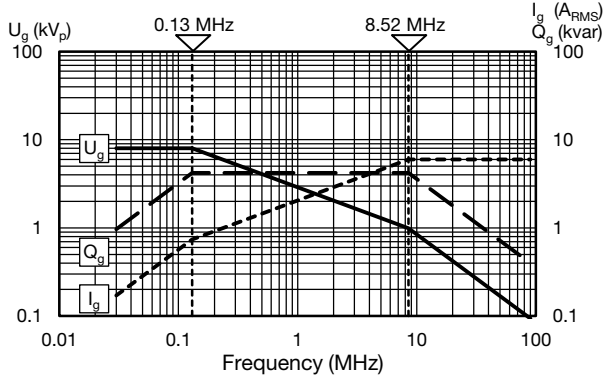
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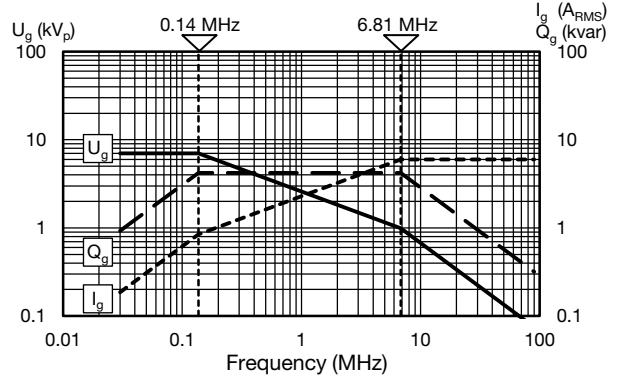
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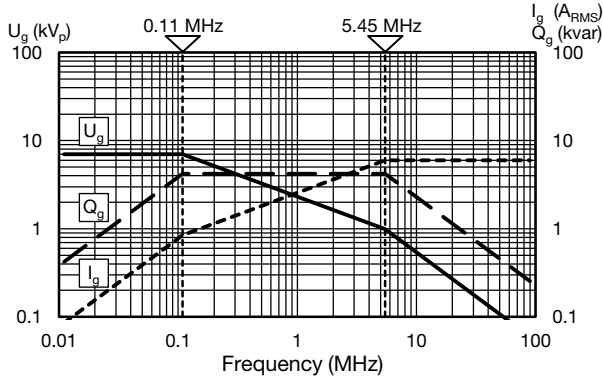
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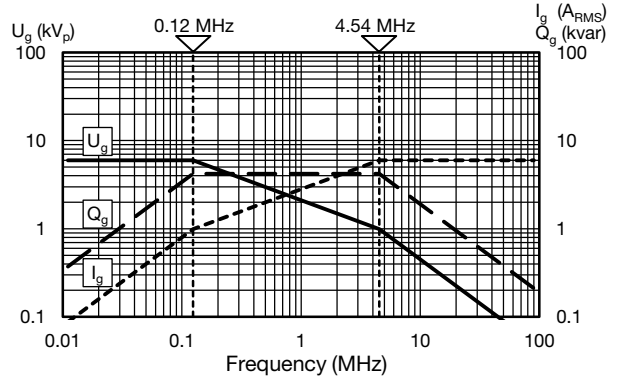
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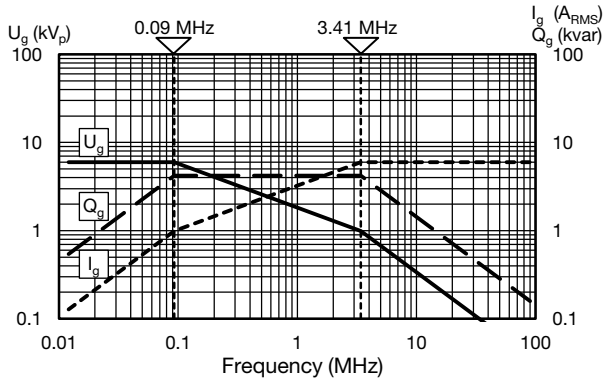
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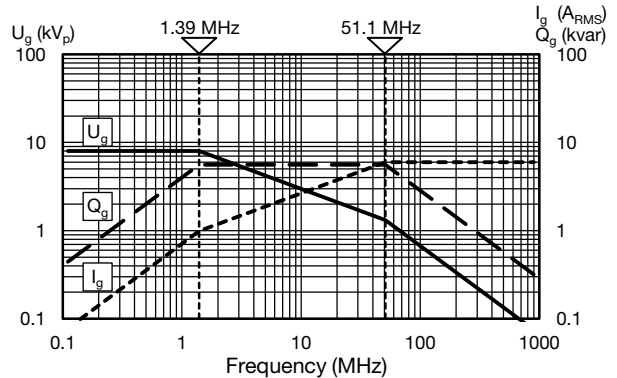
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T#020030BF401##BJ1

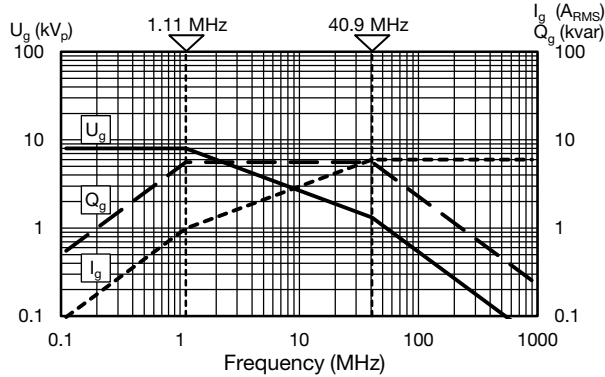


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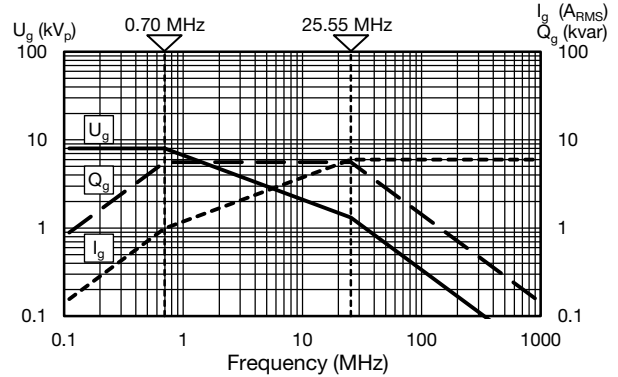


**DERATING DIAGRAMS**

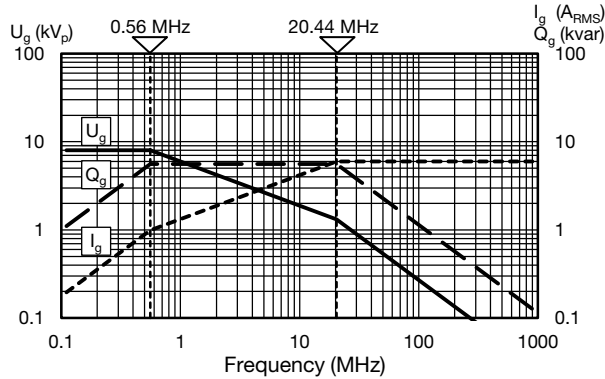
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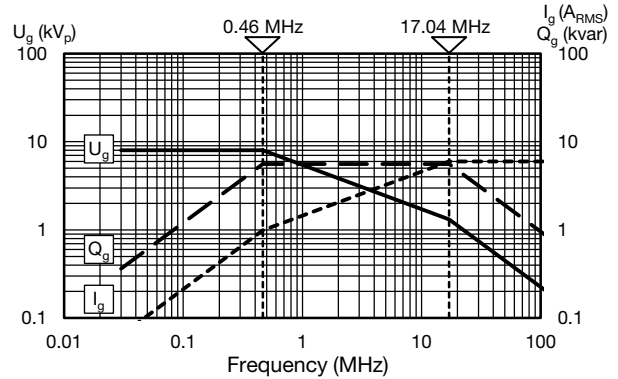
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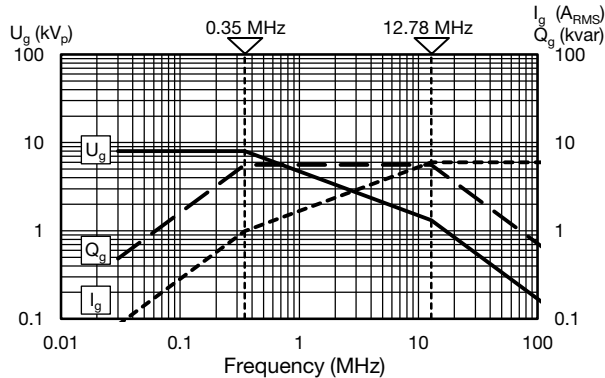
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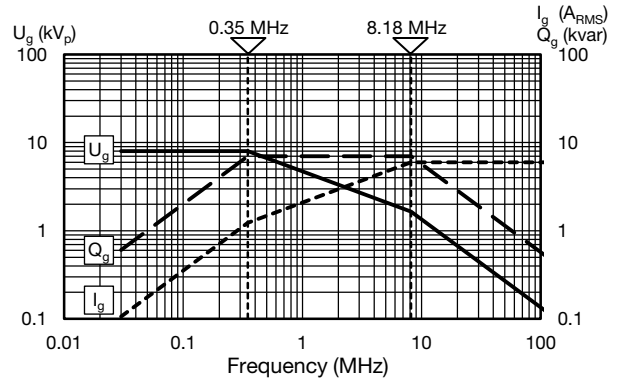
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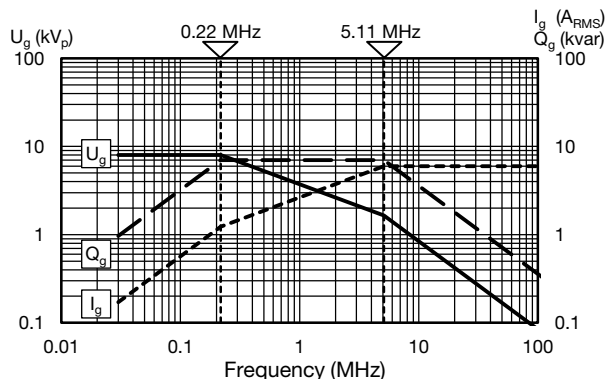
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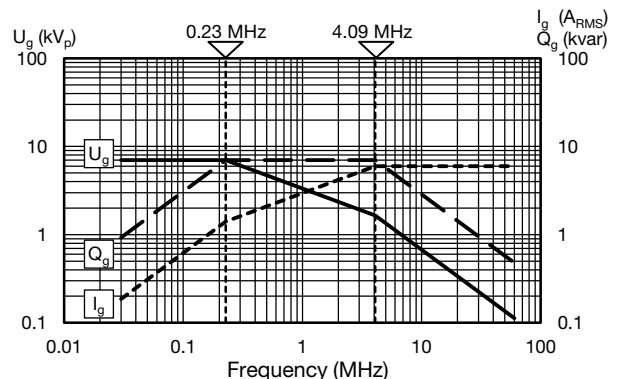
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**T#020050BP161##BH1**



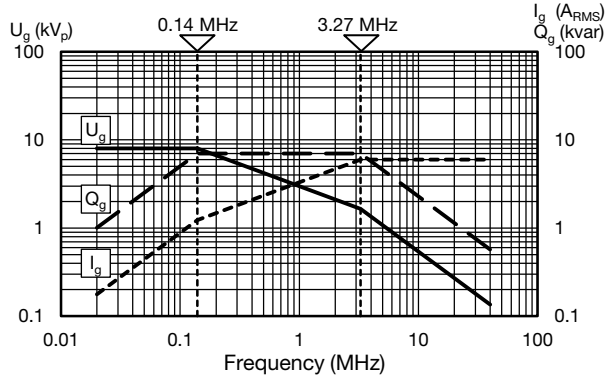
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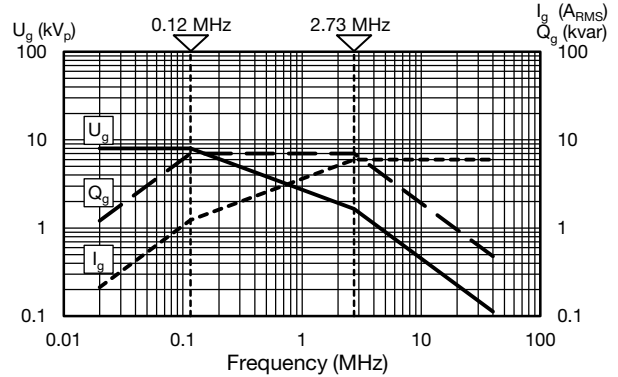


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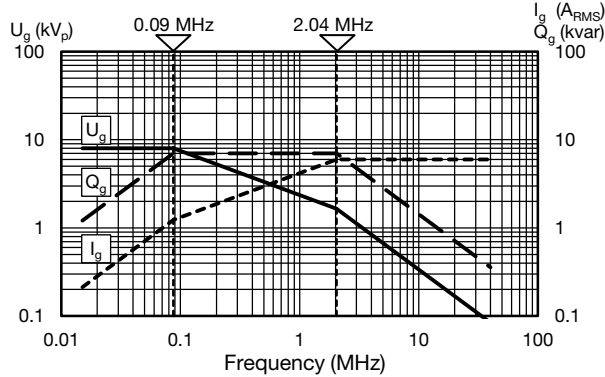
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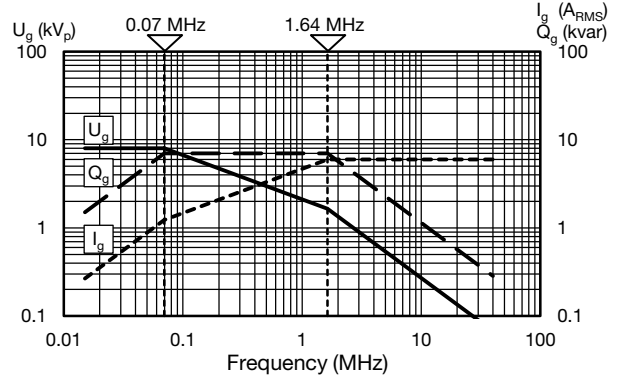
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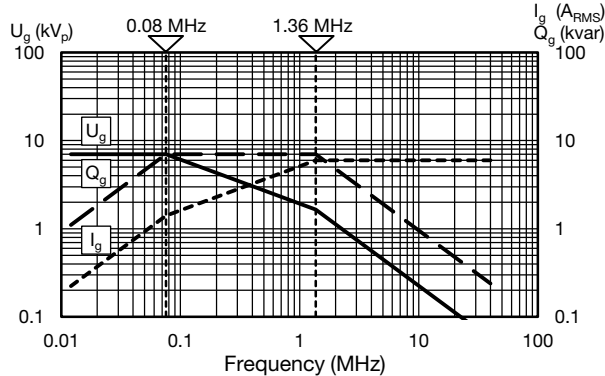
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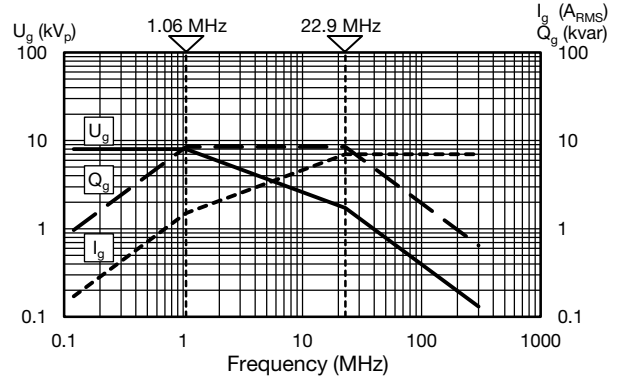
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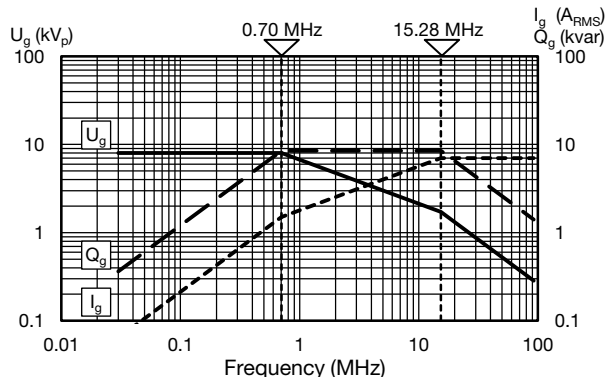
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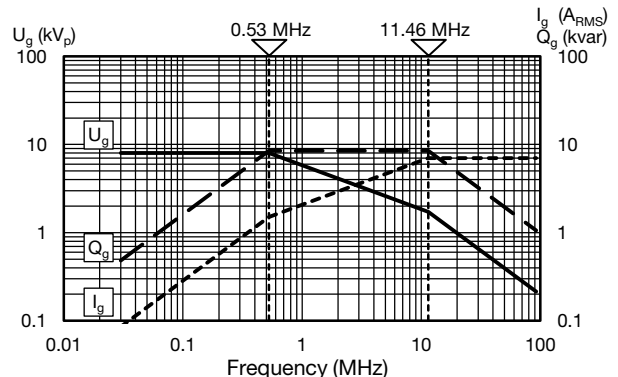
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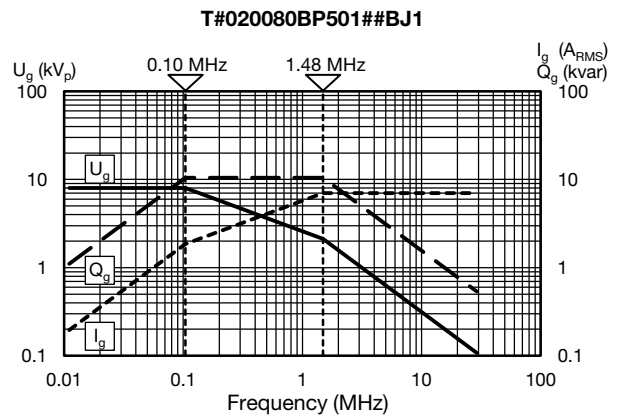
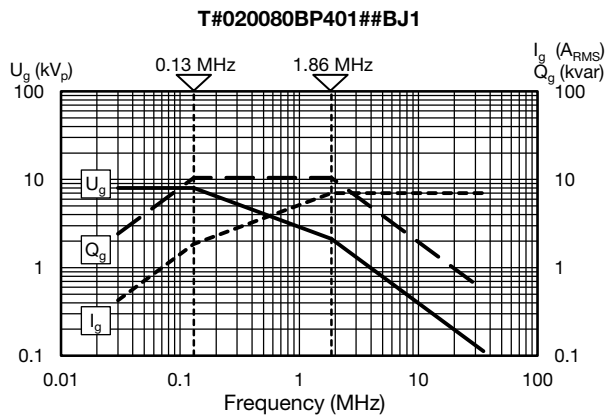
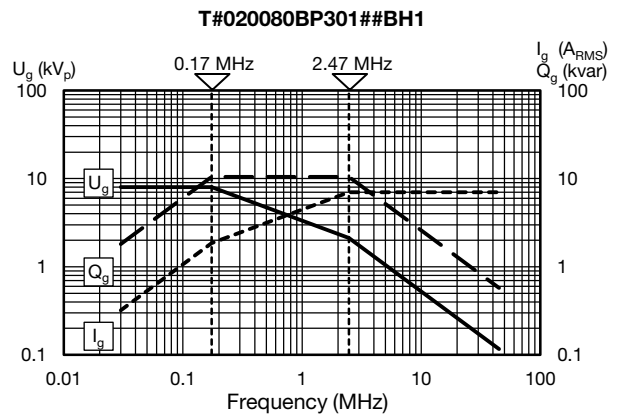
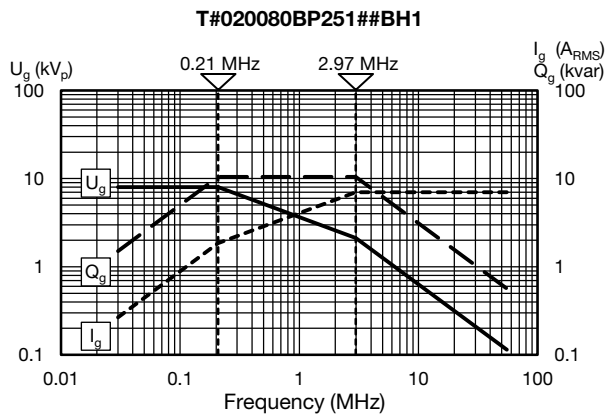
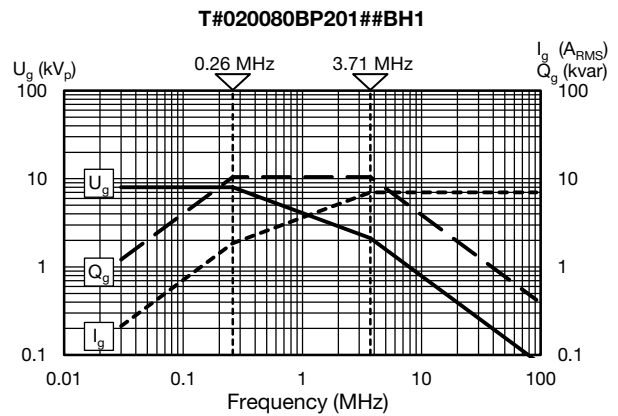
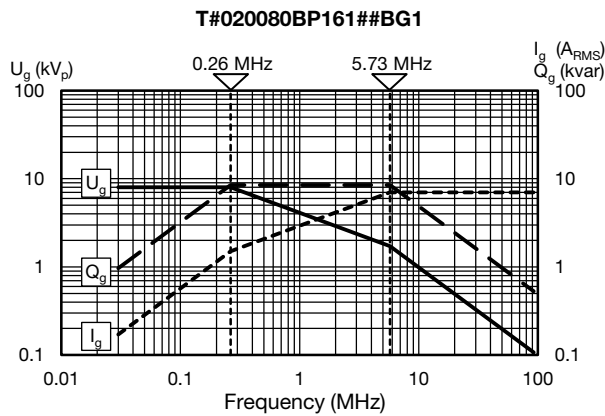
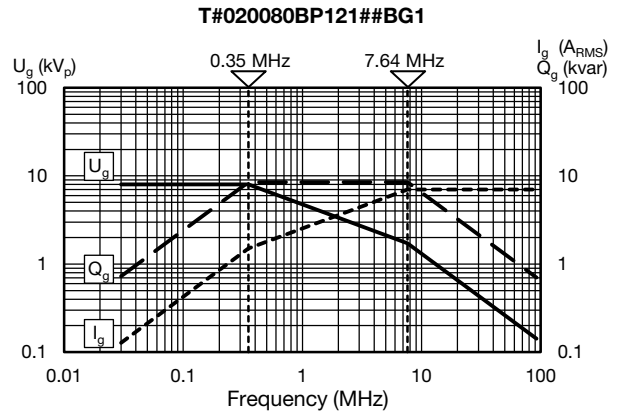
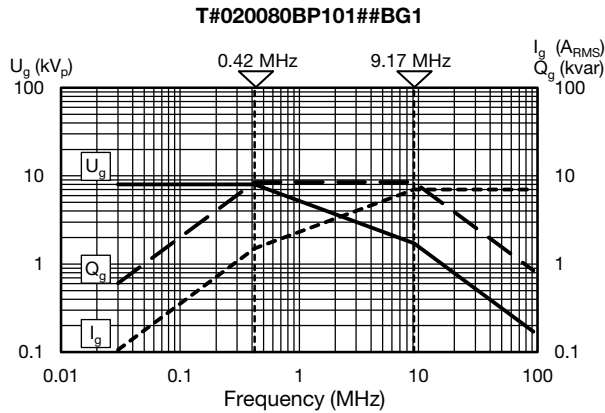
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T#020080BP800##BG1



**DERATING DIAGRAMS**

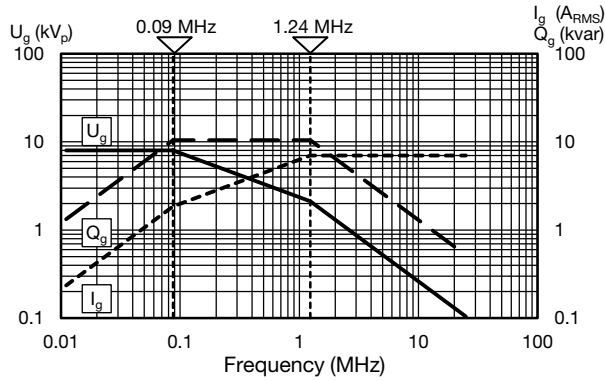




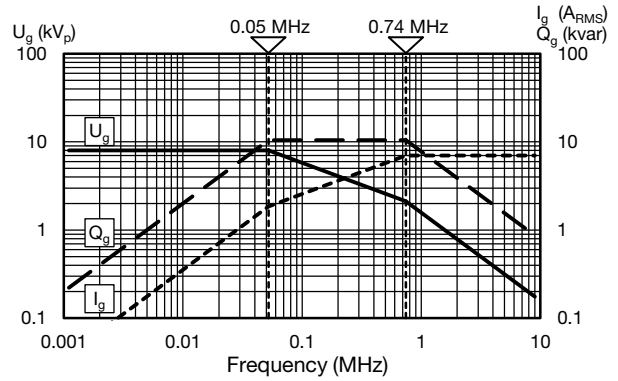


**DERATING DIAGRAMS**

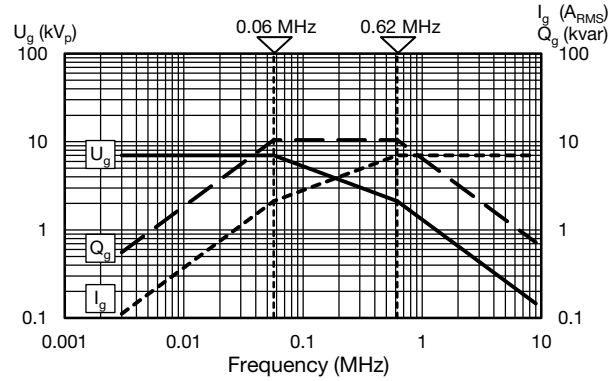
**T#020080BP601##BJ1**



**T#020080BP102##BJ1**



**T#020080VY122##BJ1**



**RELATED DOCUMENTS**

General Information

[www.vishay.com/doc?22071](http://www.vishay.com/doc?22071)



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