

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



| QUICK REFERENCE DATA      |                   |      |                     |        |
|---------------------------|-------------------|------|---------------------|--------|
| DESCRIPTION               | VALUE             |      |                     |        |
| Ceramic Class             | 1                 |      |                     |        |
| Ceramic Dielectric        | R7, R16, R42, R85 |      | R16, R42, R85, R230 |        |
| Type                      | RD 030100         |      | RD 045120           |        |
| Voltage (V <sub>p</sub> ) | 7000              | 8000 | 10 000              | 11 000 |
| Min. Capacitance (pF)     | 1500              | 100  | 800                 | 200    |
| Max. Capacitance (pF)     | 1500              | 1200 | 4700                | 3000   |
| 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 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.

### 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<sub>p</sub>
- 8.0 kV<sub>p</sub>
- 10 kV<sub>p</sub>
- 11 kV<sub>p</sub>

### 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



| 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> ) |
| TYPE RD 030100                      |         |                  |                                  |                                   |                                   |
| RD030100BP101##BF1                  | R7      | 100              | 8.0                              | 30                                | 30                                |
| RD030100BP121##BG1                  | R16     | 120              |                                  |                                   |                                   |
| RD030100BP161##BG1                  |         | 160              |                                  |                                   |                                   |
| RD030100BP201##BG1                  |         | 200              |                                  |                                   |                                   |
| RD030100BP251##BH1                  | R42     | 250              |                                  |                                   |                                   |
| RD030100BP301##BH1                  |         | 300              |                                  |                                   |                                   |
| RD030100BP401##BH1                  |         | 400              |                                  |                                   |                                   |
| RD030100BP501##BH1                  |         | 500              |                                  |                                   |                                   |
| RD030100BP601##BJ1                  | R85     | 600              |                                  |                                   |                                   |
| RD030100BP801##BJ1                  |         | 800              |                                  |                                   |                                   |
| RD030100BP102##BJ1                  |         | 1000             |                                  |                                   |                                   |
| RD030100BP122##BJ1                  |         | 1200             |                                  |                                   |                                   |
| RD030100VY152##BJ1                  |         | 1500             | 7.0                              |                                   |                                   |
| TYPE RD 045120                      |         |                  |                                  |                                   |                                   |
| RD045120WE201##BG1                  | R16     | 200              | 11                               | 60                                | 50                                |
| RD045120WE251##BG1                  |         | 250              |                                  |                                   |                                   |
| RD045120WE301##BG1                  |         | 300              |                                  |                                   |                                   |
| RD045120WE401##BH1                  | R42     | 400              |                                  |                                   |                                   |
| RD045120WE501##BH1                  |         | 500              |                                  |                                   |                                   |
| RD045120WE601##BH1                  |         | 600              |                                  |                                   |                                   |
| RD045120BH801##BH1                  |         | 800              | 10                               |                                   |                                   |
| RD045120WE102##BJ1                  | R85     | 1000             | 11                               |                                   |                                   |
| RD045120WE122##BJ1                  |         | 1200             |                                  |                                   |                                   |
| RD045120BH152##BJ1                  |         | 1500             | 10                               |                                   |                                   |
| RD045120WE202##BK1                  | R230    | 2000             | 11                               |                                   |                                   |
| RD045120WE302##BK1                  |         | 3000             |                                  |                                   |                                   |
| RD045120BH472##BK1                  |         |                  | 4700                             |                                   |                                   |

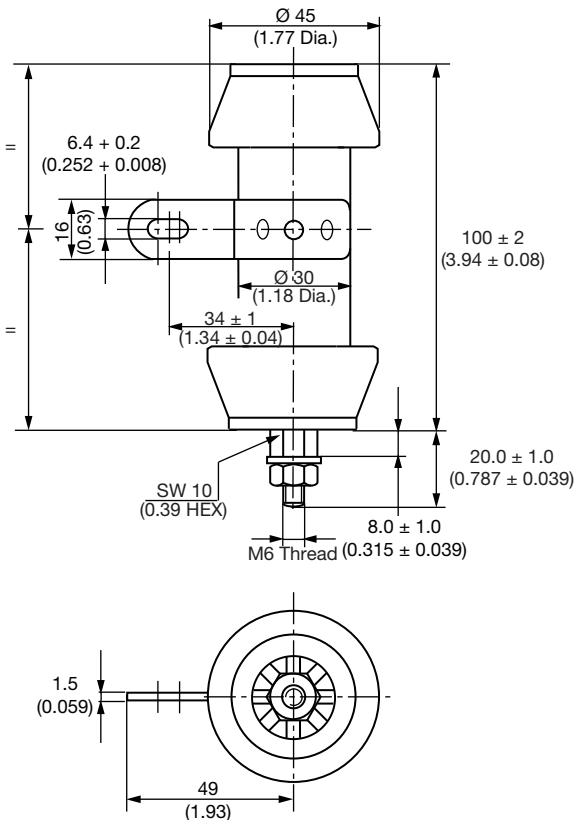
**Notes**

- ## 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

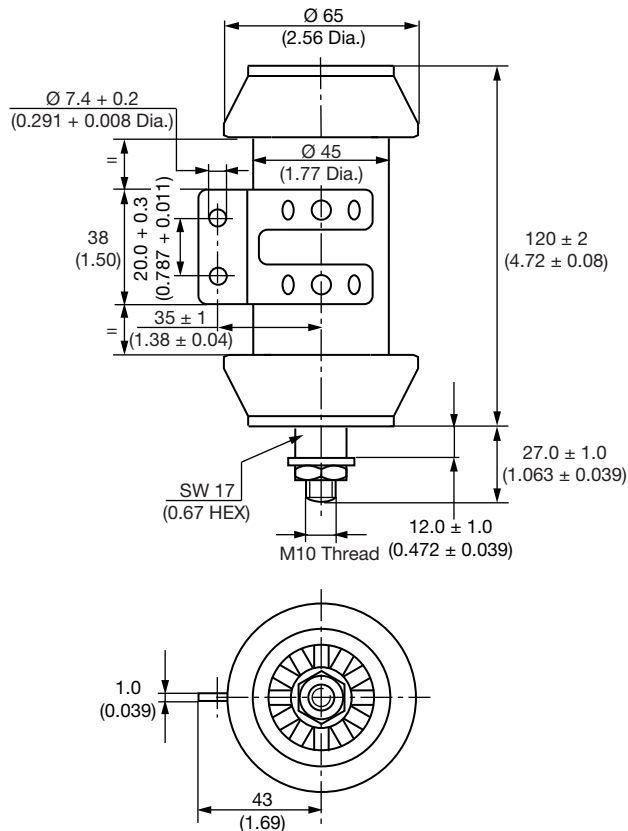


**DIMENSIONS** in millimeters (inches)

**RD 030100**

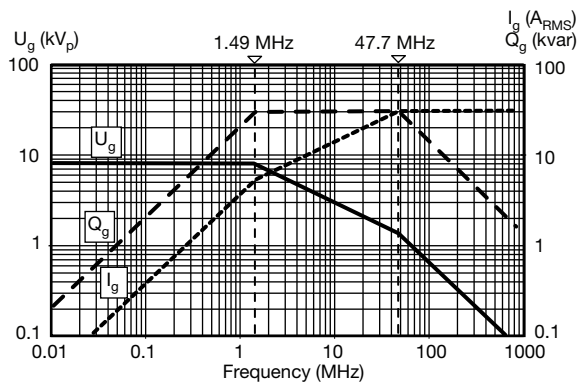


**RD 045120**

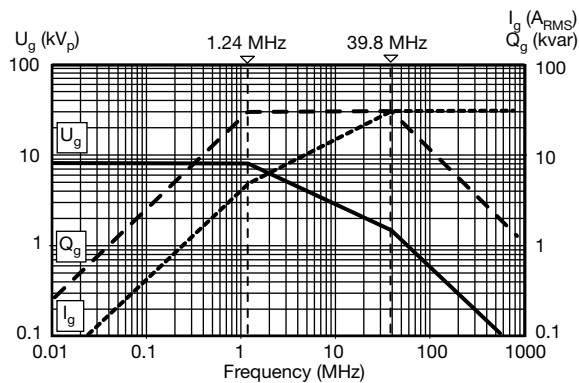


**DERATING DIAGRAMS**

**RD030100BP101##BF1**



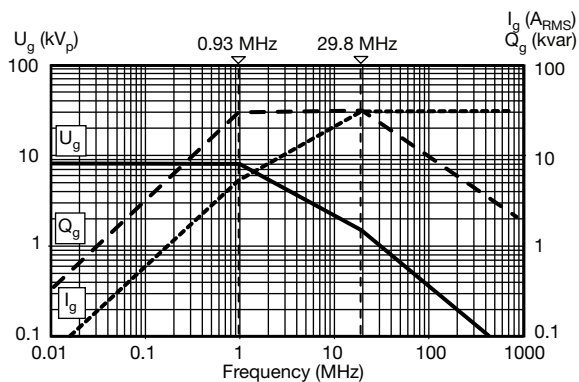
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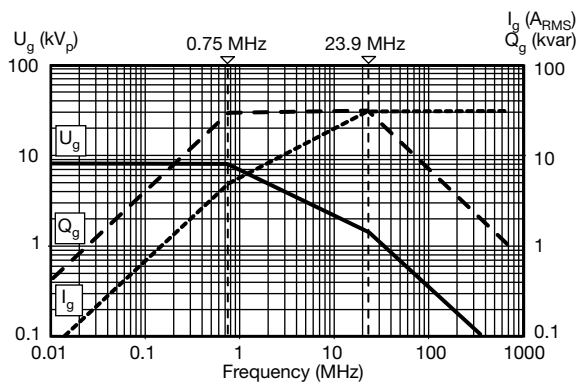


DERATING DIAGRAMS

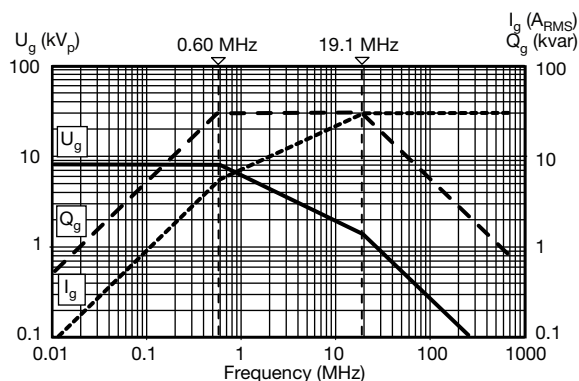
RD030100BP161##BG1



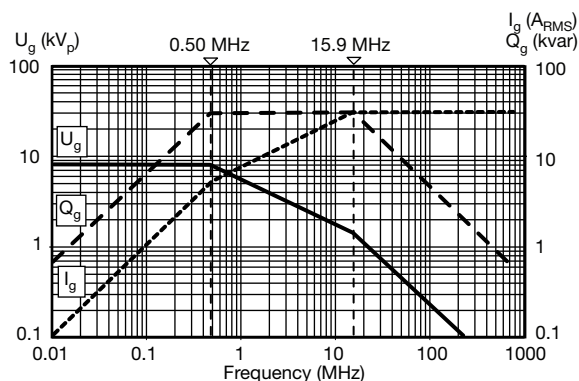
RD030100BP201##BG1



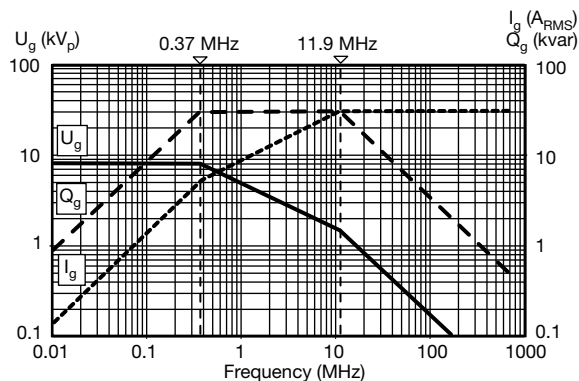
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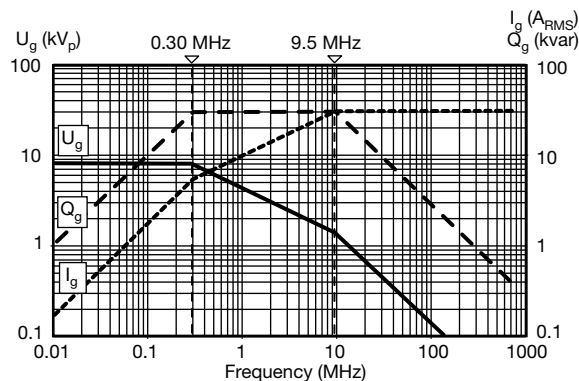
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RD030100BP401##BH1



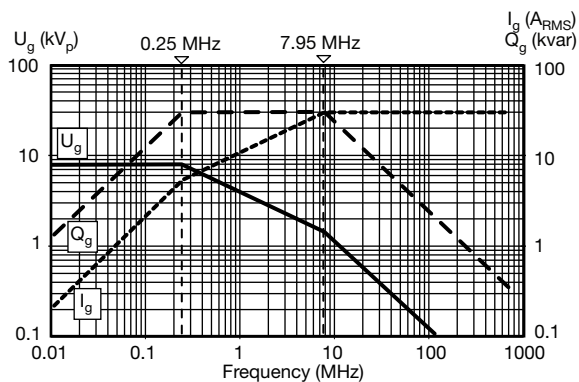
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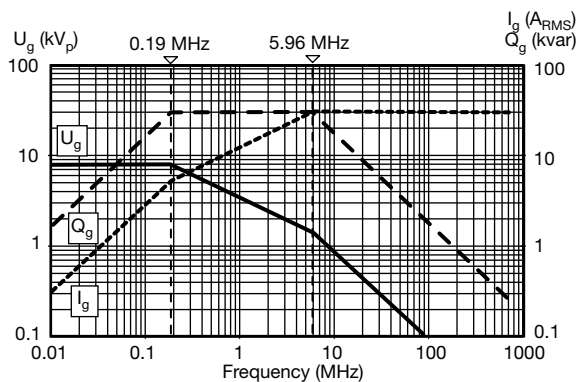


DERATING DIAGRAMS

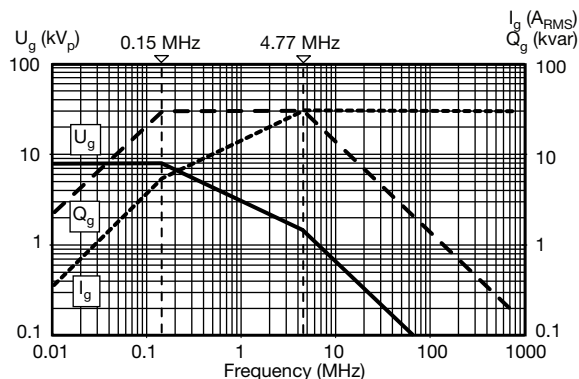
RD030100BP601##BJ1



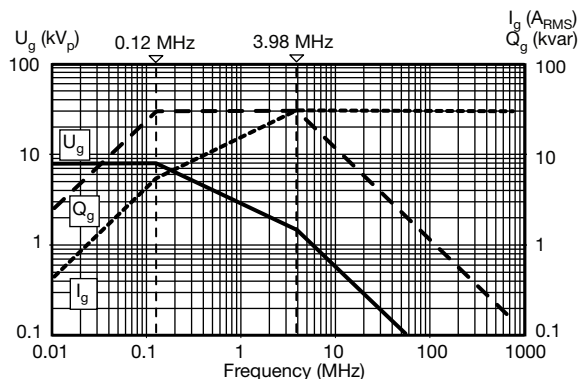
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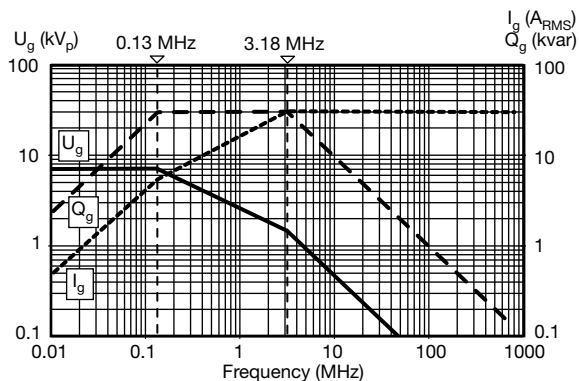
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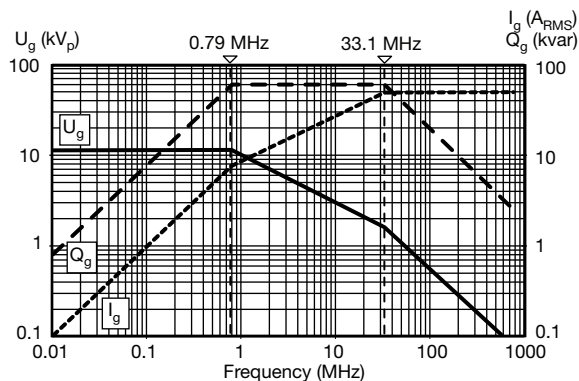
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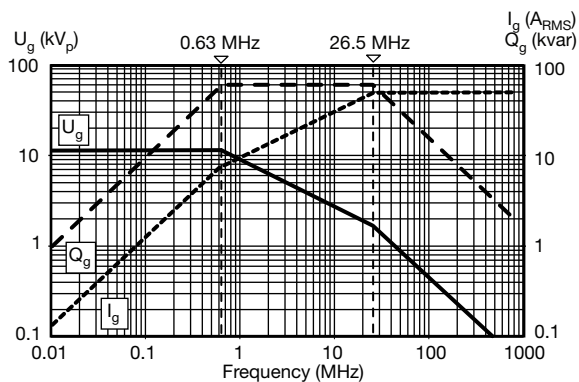
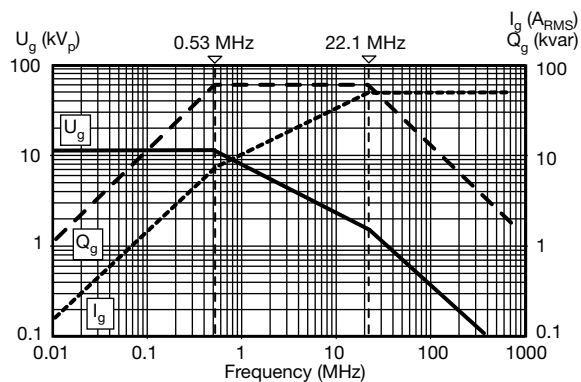
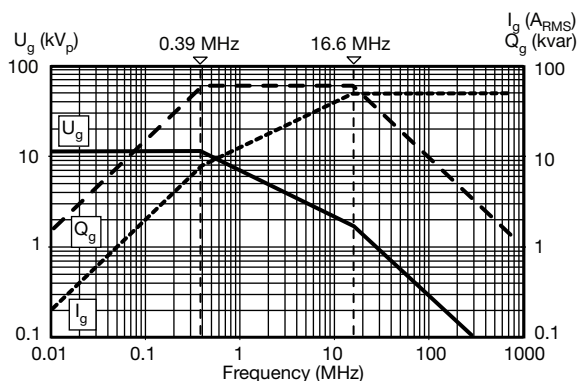
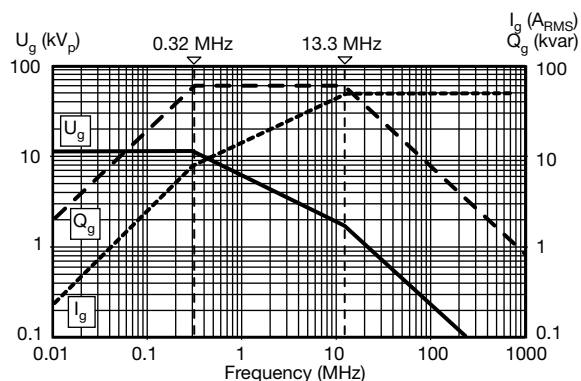
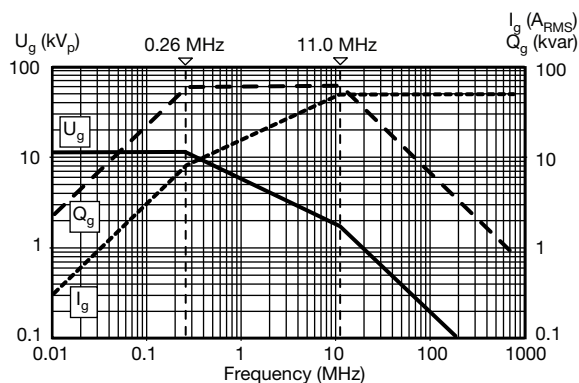
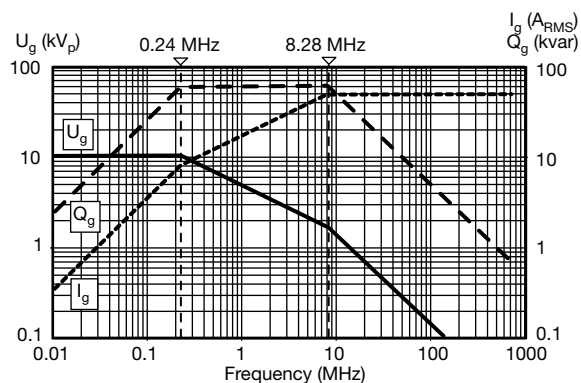


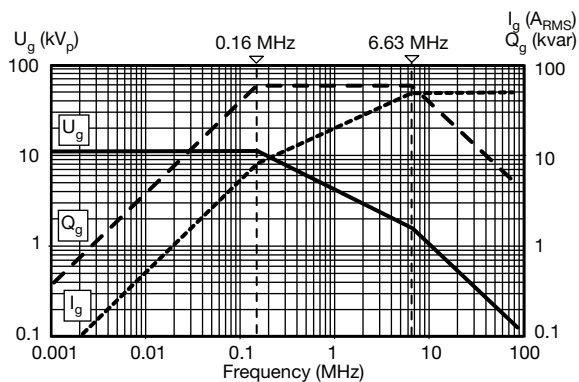
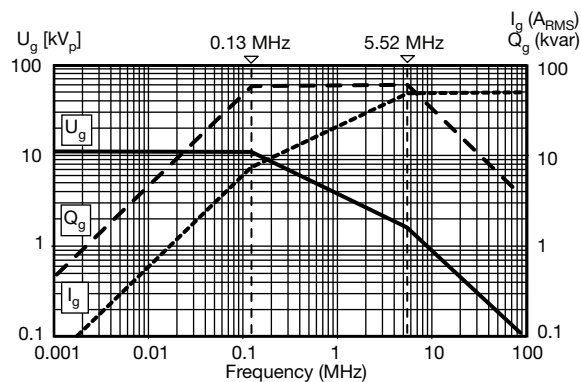
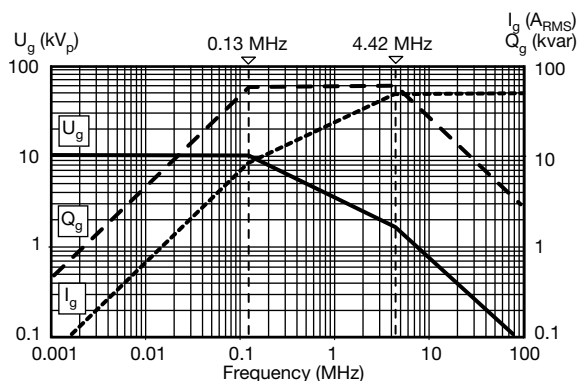
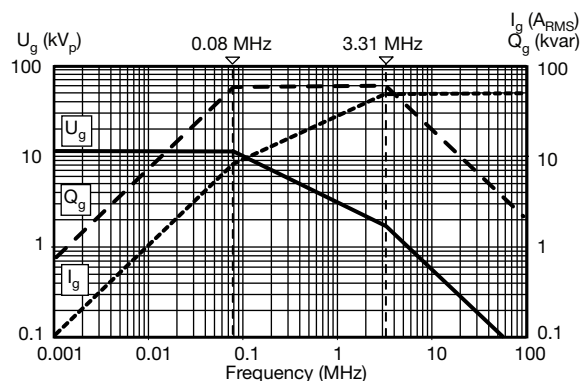
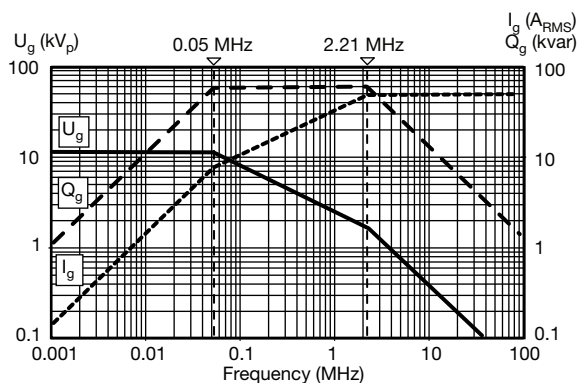
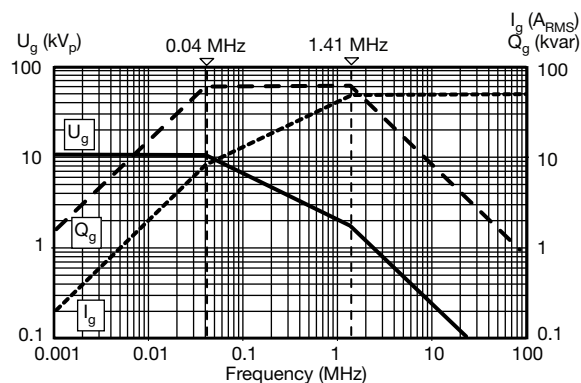
RD030100VY152##BJ1



RD045120WE201##BG1



**DERATING DIAGRAMS**
**RD045120WE251##BG1**

**RD045120WE301##BG1**

**RD045120WE401##BH1**

**RD045120WE501##BH1**

**RD045120WE601##BH1**

**RD045120BH801##BH1**


**DERATING DIAGRAMS**
**RD045120WE102##BJ1**

**RD045120WE122##BJ1**

**RD045120BH152##BJ1**

**RD045120WE202##BK1**

**RD045120WE302##BK1**

**RD045120BH472##BK1**

**RELATED DOCUMENTS**

General Information

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



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