

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



### FEATURES

- 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 |        | R7, R42, R85 |        |        |        | R7, R16, R42, R85, R230 |        |        |        |
| Type                      | TD 045090         |        | TD 045120    |        |        |        | TD 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. 10 000 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

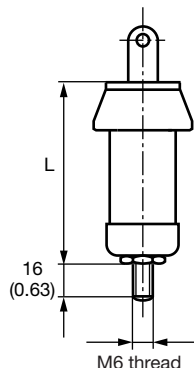


| SAP PART NUMBER AND ELECTRICAL DATA |         |                  |                                  |                                   |                                   |
|-------------------------------------|---------|------------------|----------------------------------|-----------------------------------|-----------------------------------|
| PART NUMBER                         | CERAMIC | CAP. VALUES (pF) | RATED VOLTAGE (kV <sub>p</sub> ) | RATED POWER <sup>(1)</sup> (kvar) | RATED CURRENT (A <sub>RM</sub> S) |
| TYPE TD 045090                      |         |                  |                                  |                                   |                                   |
| TD045090BH600##BF1                  | R7      | 60               | 10                               | 22                                | 12                                |
| TD045090BH800##BF1                  |         | 80               |                                  |                                   |                                   |
| TD045090BH101##BF1                  |         | 100              |                                  |                                   |                                   |
| TD045090BH161##BF1                  |         | 160              |                                  |                                   |                                   |
| TD045090BH201##BG1                  | R16     | 200              |                                  | 28                                |                                   |
| TD045090BH251##BG1                  |         | 250              |                                  |                                   |                                   |
| TD045090BH301##BG1                  |         | 300              |                                  |                                   |                                   |
| TD045090BH401##BH1                  | R42     | 400              |                                  |                                   |                                   |
| TD045090BH501##BH1                  |         | 500              |                                  |                                   |                                   |
| TD045090BH601##BH1                  |         | 600              |                                  |                                   |                                   |
| TD045090BH801##BJ1                  | R85     | 800              |                                  |                                   |                                   |
| TD045090BH102##BJ1                  |         | 1000             |                                  |                                   |                                   |
| TD045090BH162##BJ1                  |         | 1600             |                                  |                                   |                                   |
| TD045090WC252##BJ1                  |         | 2500             |                                  |                                   |                                   |
|                                     |         | 9.0              |                                  |                                   |                                   |
| TYPE TD 045120                      |         |                  |                                  |                                   |                                   |
| TD045120WH500##BF1                  | R7      | 50               | 13                               | 28                                | 10                                |
| TD045120WH600##BF1                  |         | 60               | 12                               |                                   |                                   |
| TD045120WF800##BF1                  |         | 80               |                                  |                                   |                                   |
| TD045120WF101##BF1                  |         | 100              |                                  |                                   |                                   |
| TD045120WE161##BF1                  |         | 160              | 11                               |                                   |                                   |
| TD045120WH251##BH1                  | R42     | 250              | 13                               | 35                                |                                   |
| TD045120WH301##BH1                  |         | 300              |                                  |                                   |                                   |
| TD045120WH401##BH1                  |         | 400              |                                  |                                   |                                   |
| TD045120WE501##BH1                  |         | 500              | 11                               |                                   |                                   |
| TD045120WH601##BJ1                  | R85     | 600              | 13                               |                                   |                                   |
| TD045120WH801##BJ1                  |         | 800              |                                  |                                   |                                   |
| TD045120WH102##BJ1                  |         | 1000             |                                  |                                   |                                   |
| TD045120BH162##BJ1                  |         | 1600             | 10                               |                                   |                                   |
| TYPE TD 045150                      |         |                  |                                  |                                   |                                   |
| TD045150WJ600##BF1                  | R7      | 60               | 14                               | 35                                | 12                                |
| TD045150WJ800##BF1                  |         | 80               |                                  |                                   |                                   |
| TD045150WJ101##BF1                  |         | 100              |                                  |                                   |                                   |
| TD045150WJ201##BG1                  | R16     | 200              |                                  |                                   |                                   |
| TD045150WJ301##BH1                  | R42     | 300              | 13                               | 42                                |                                   |
| TD045150WH401##BH1                  |         | 400              |                                  |                                   |                                   |
| TD045150WH501##BH1                  |         | 500              |                                  |                                   |                                   |
| TD045150WH601##BH1                  |         | 600              |                                  |                                   |                                   |
| TD045150WJ801##BJ1                  | R85     | 800              | 14                               |                                   |                                   |
| TD045150WH102##BJ1                  |         | 1000             | 13                               |                                   |                                   |
| TD045150WH162##BJ1                  |         | 1600             |                                  |                                   |                                   |
| TD045150WF202##BJ1                  |         | 2000             | 12                               |                                   |                                   |
| TD045150WJ302##BK1                  |         | R230             | 3000                             |                                   |                                   |
| TD045150WJ402##BK1                  | 4000    |                  |                                  |                                   |                                   |
| TD045150WE502##BK1                  | 5000    |                  | 11                               |                                   |                                   |

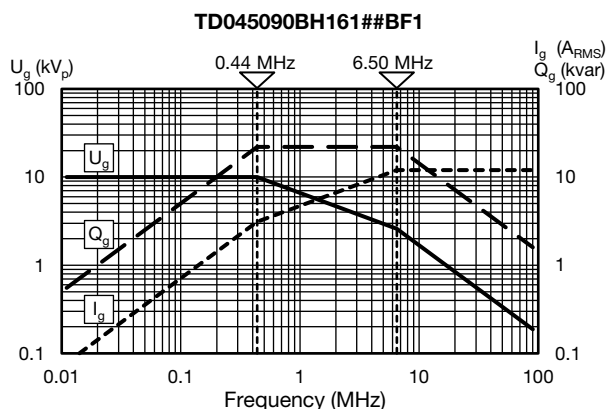
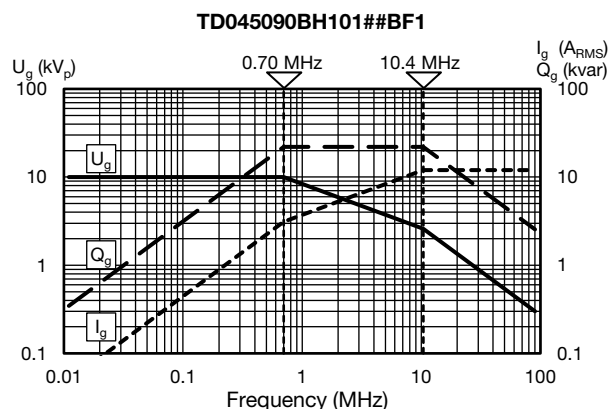
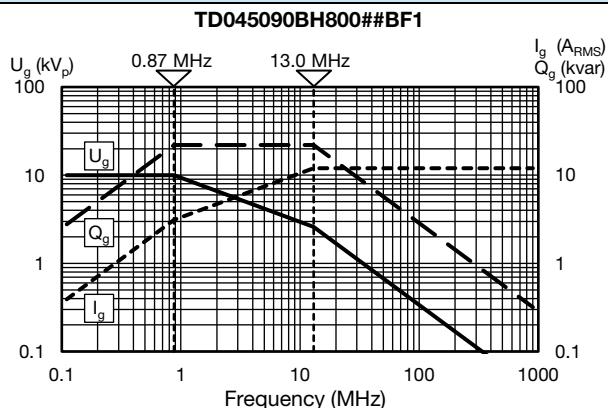
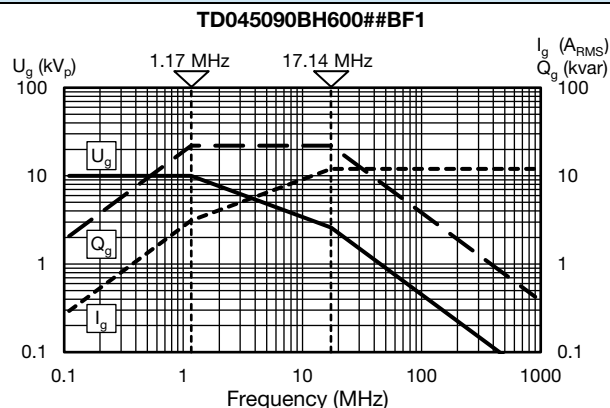
**Notes**

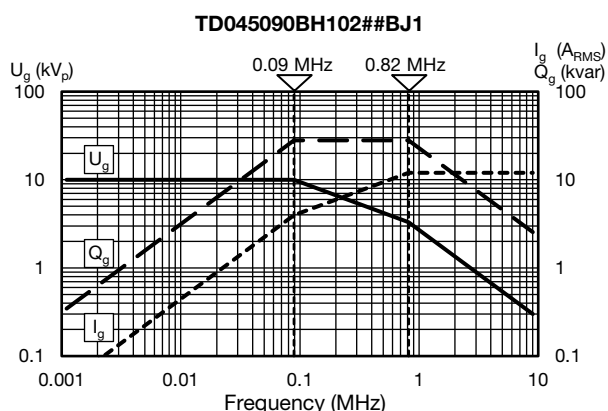
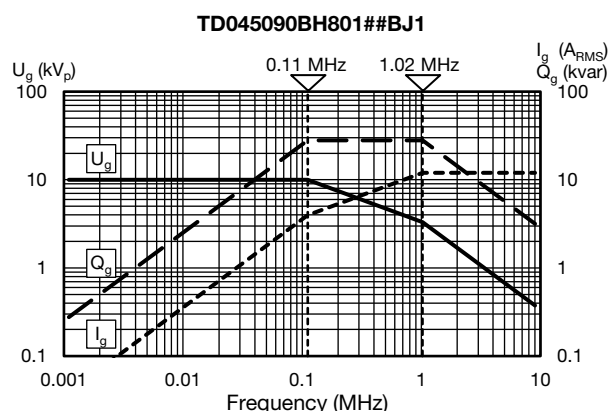
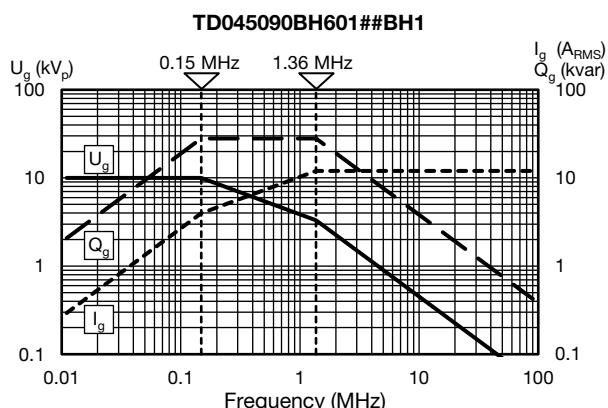
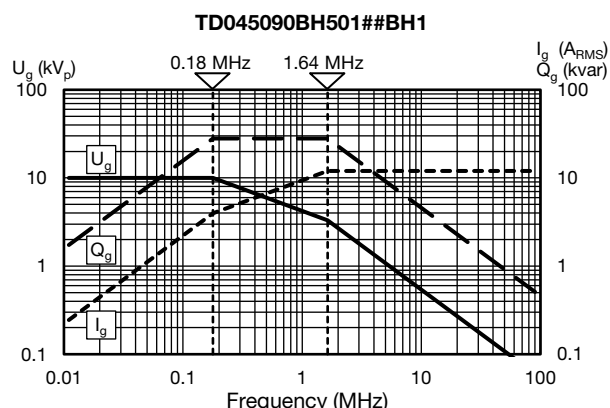
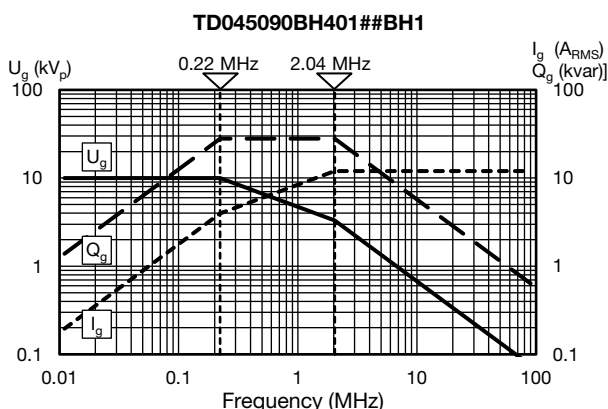
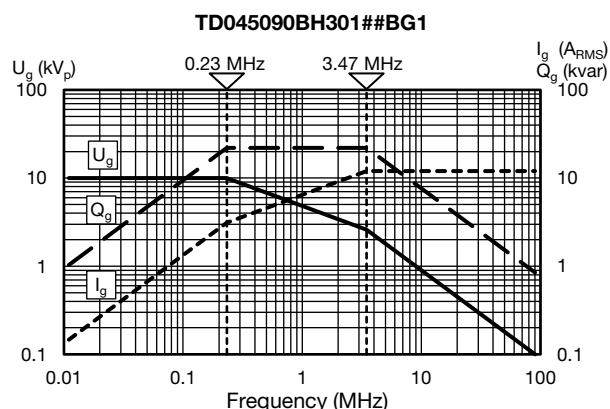
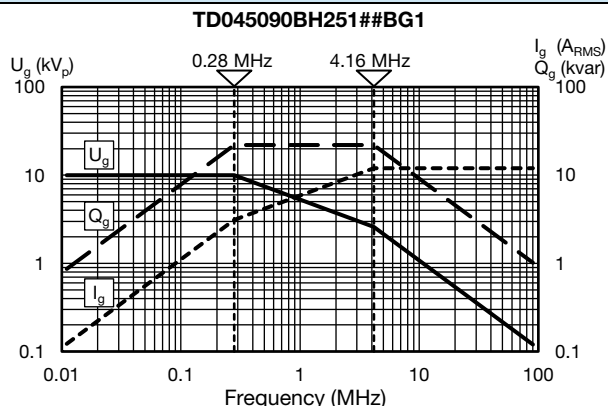
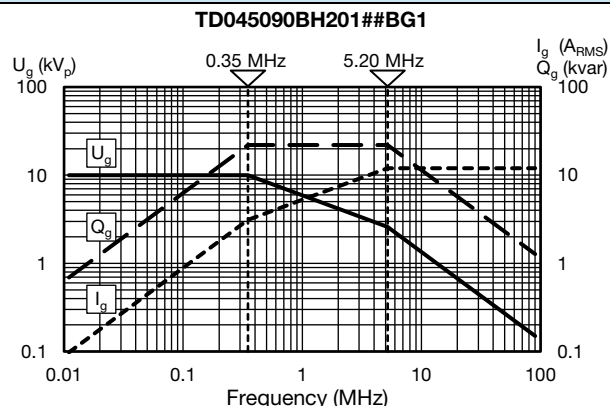
- ## 14<sup>th</sup> to 15<sup>th</sup> digit: capacitance tolerance code  $\pm 20\% = 38$ ,  $\pm 10\% = 36$ ,  $\pm 5\% = 33$

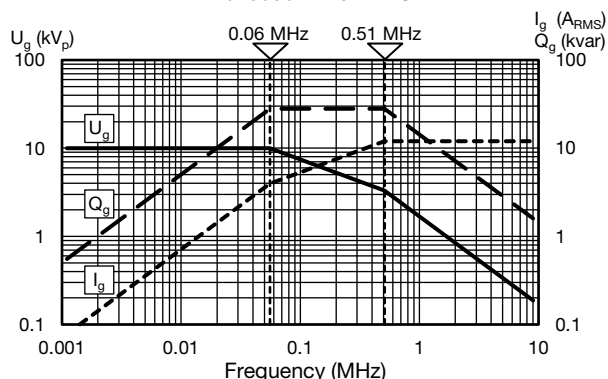
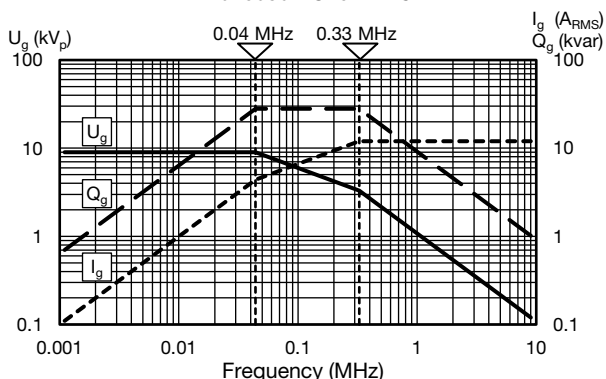
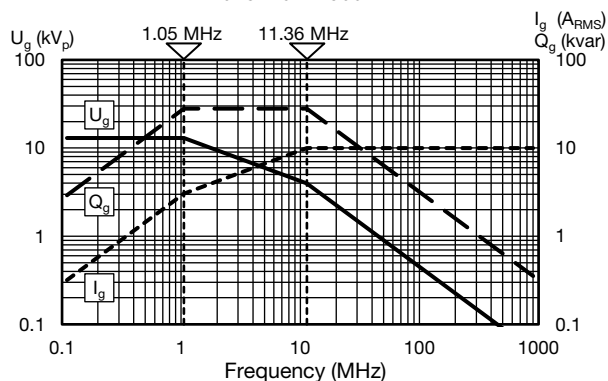
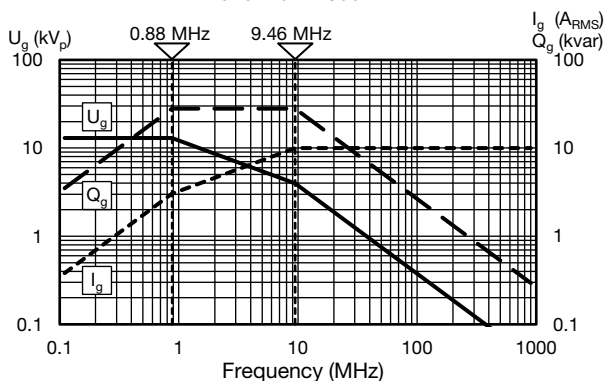
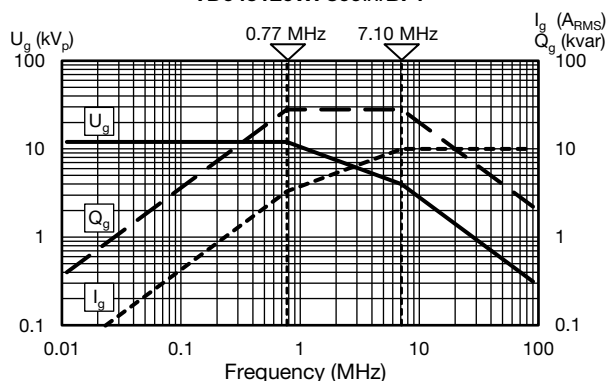
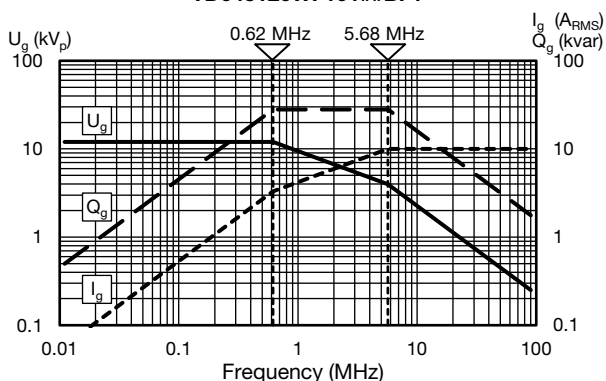
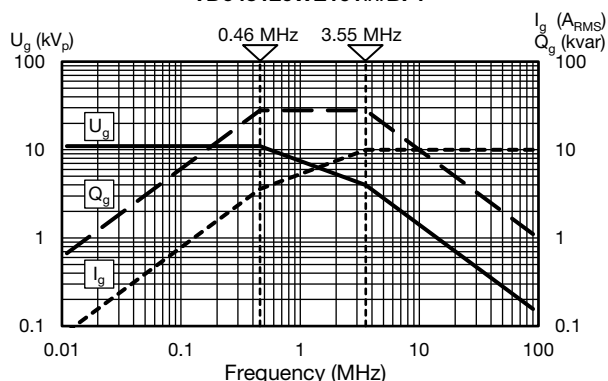
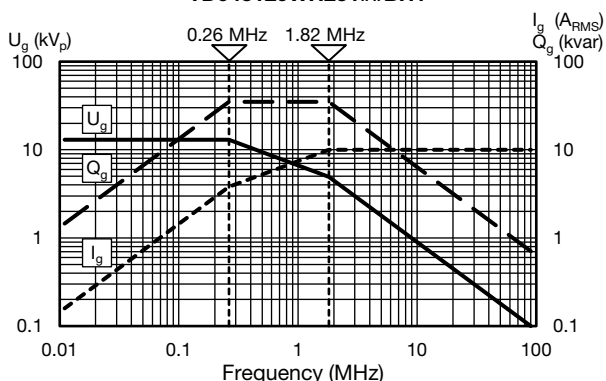
<sup>(1)</sup> The surface temperature during operation must not exceed +100 °C

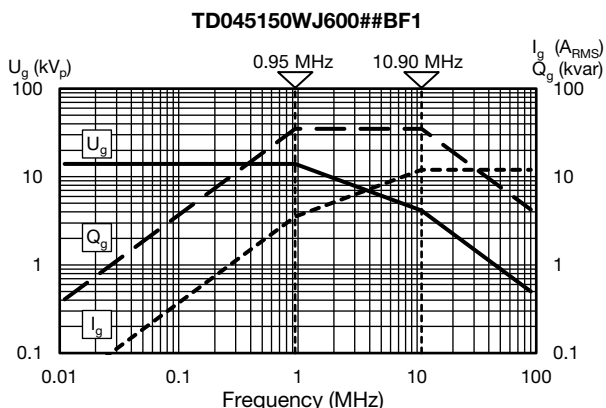
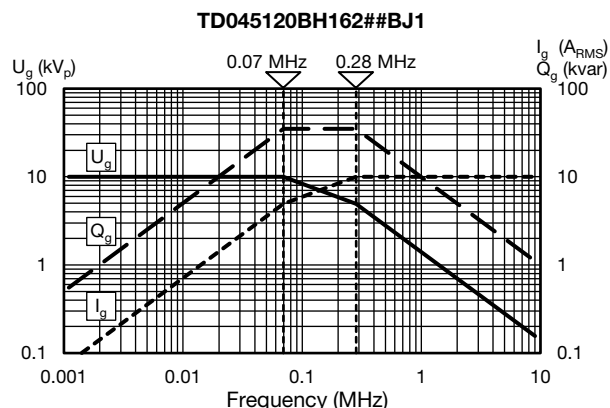
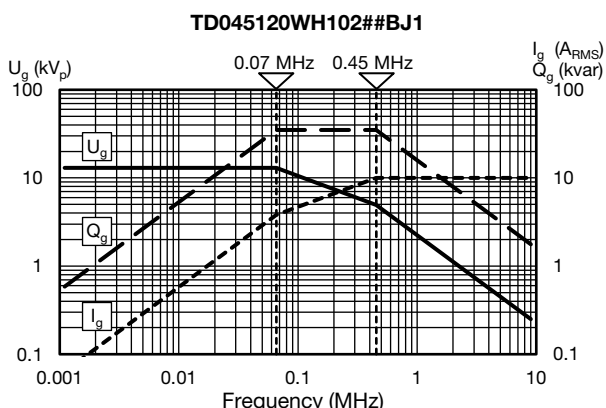
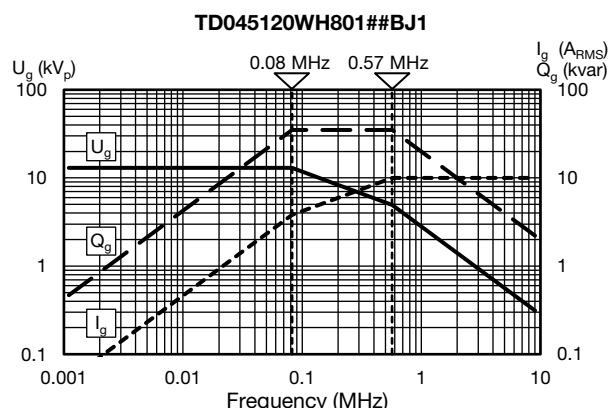
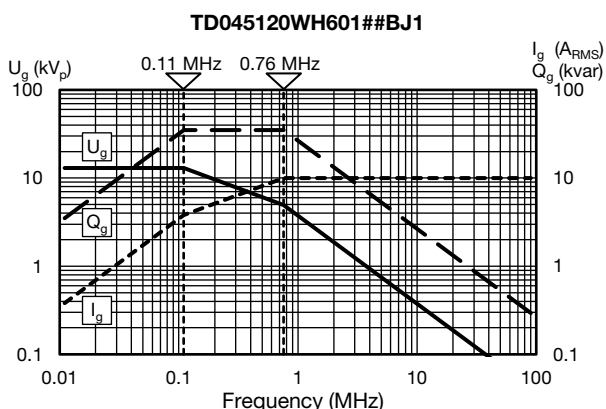
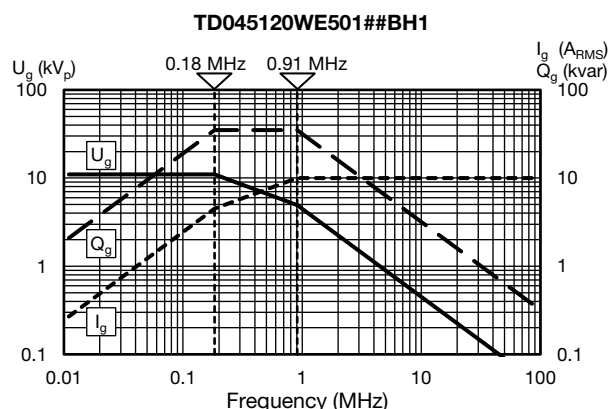
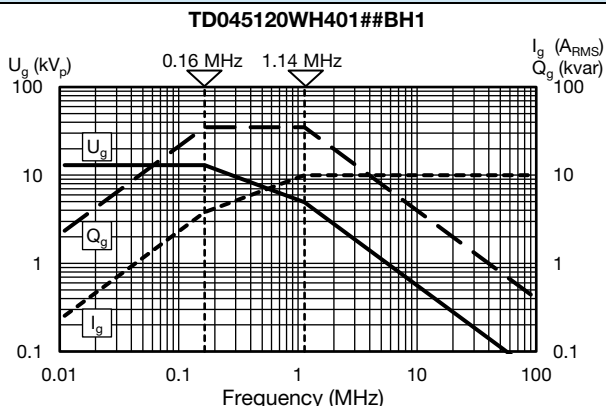
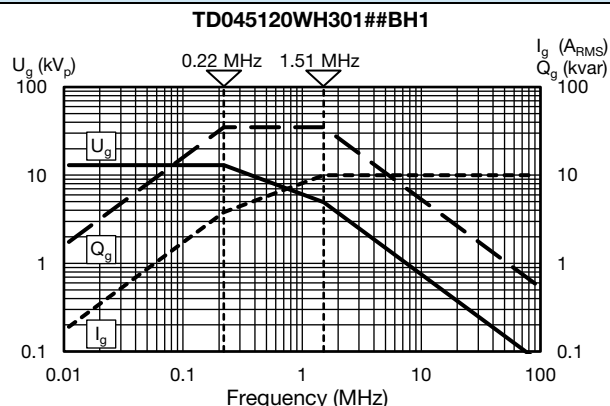
**DIMENSIONS** in millimeters (inches)


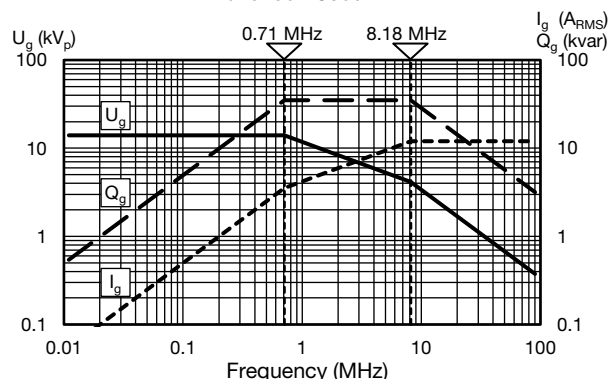
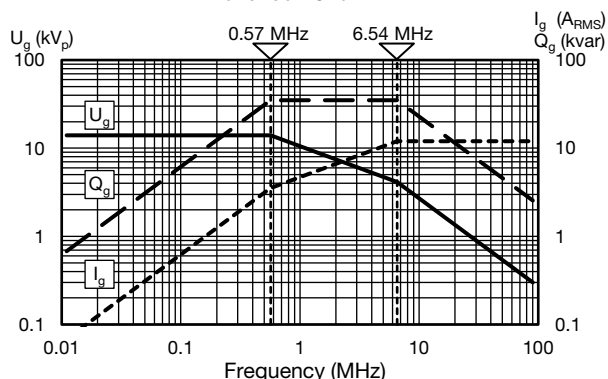
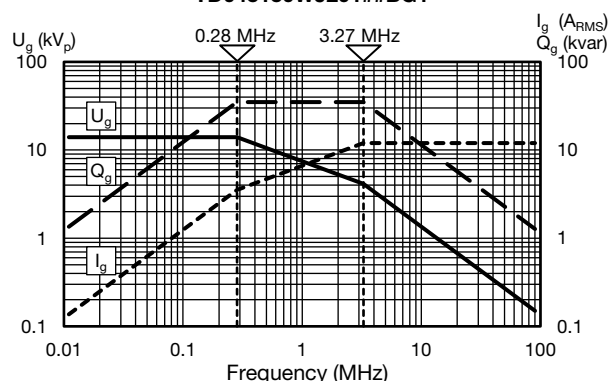
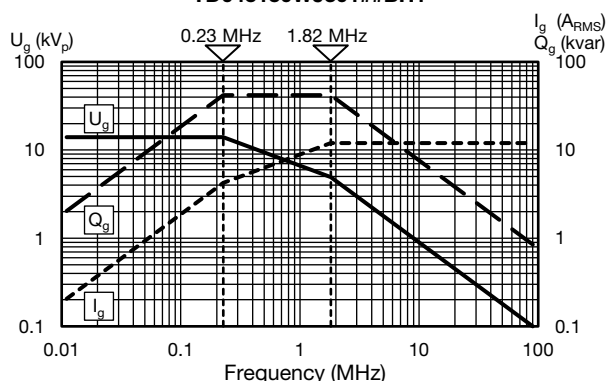
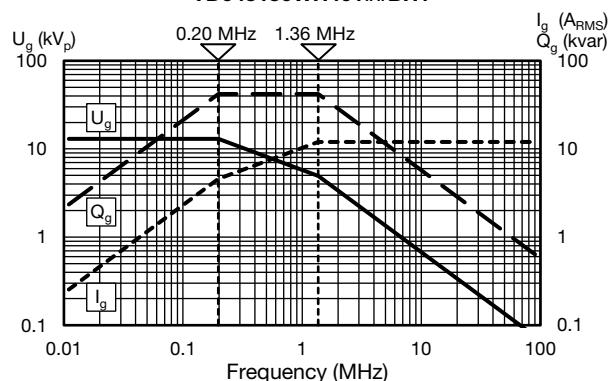
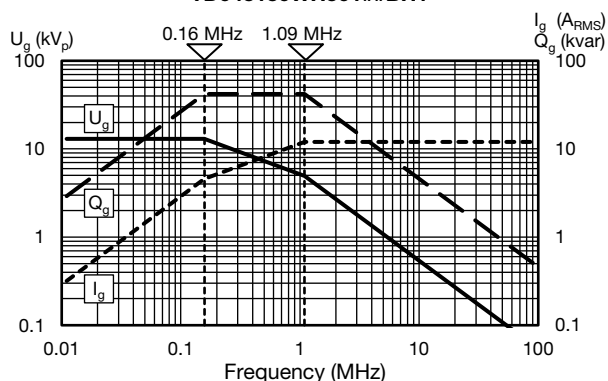
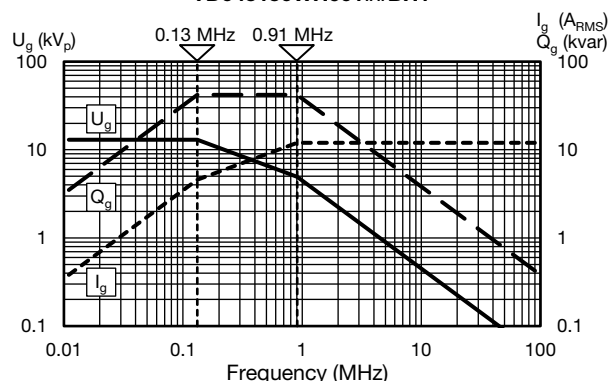
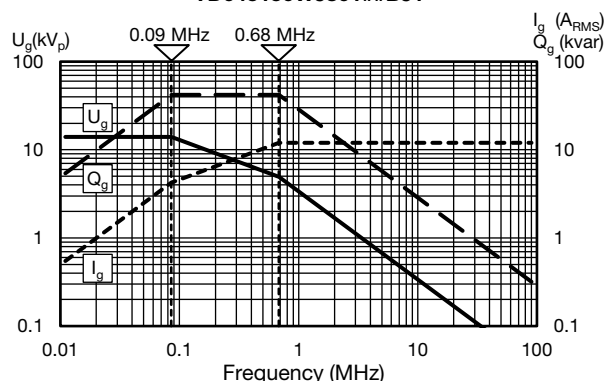
| TYPE     | TD 045090 | TD 045120  | TD 045150  |
|----------|-----------|------------|------------|
| Length L | 97 (3.82) | 127 (5.00) | 157 (6.18) |

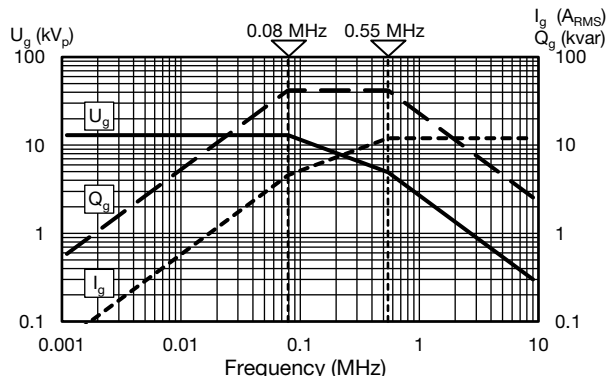
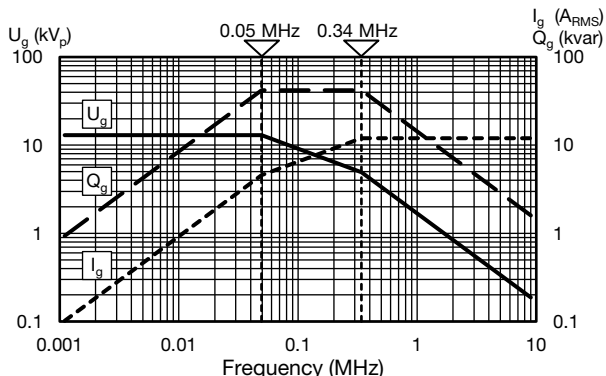
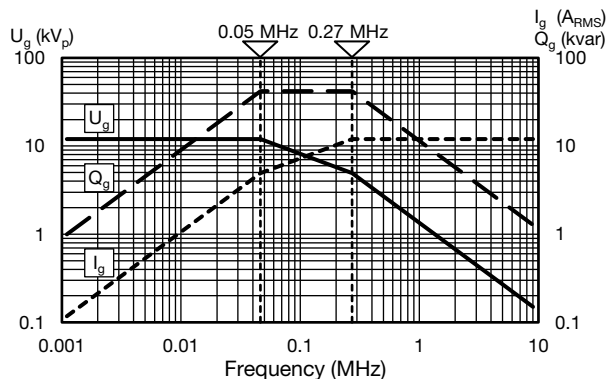
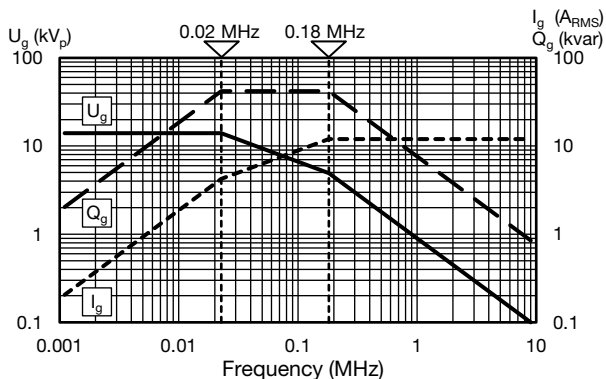
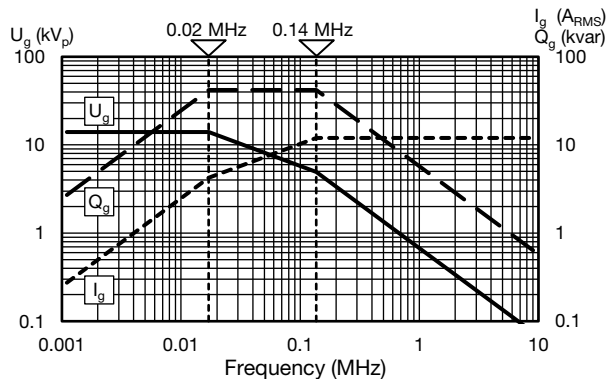
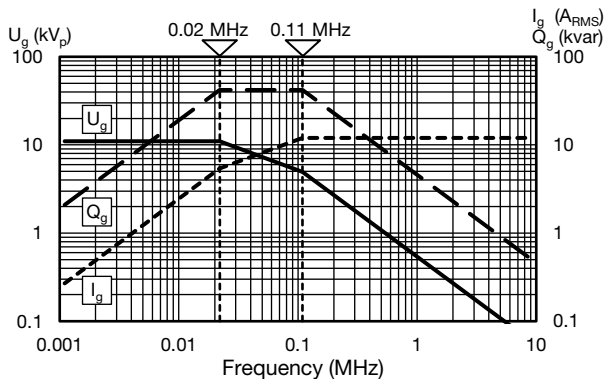
**DERATING DIAGRAMS**


**DERATING DIAGRAMS**


**DERATING DIAGRAMS**
**TD045090BH162##BJ1**

**TD045090WC252##BJ1**

**TD045120WH500##BF1**

**TD045120WH600##BF1**

**TD045120WF800##BF1**

**TD045120WF101##BF1**

**TD045120WE161##BF1**

**TD045120WH251##BH1**


**DERATING DIAGRAMS**


**DERATING DIAGRAMS**
**TD045150WJ800##BF1**

**TD045150WJ101##BF1**

**TD045150WJ201##BG1**

**TD045150WJ301##BH1**

**TD045150WH401##BH1**

**TD045150WH501##BH1**

**TD045150WH601##BH1**

**TD045150WJ801##BJ1**


**DERATING DIAGRAMS**
**TD045150WH102##BJ1**

**TD045150WH162##BJ1**

**TD045150WF202##BJ1**

**TD045150WJ302##BK1**

**TD045150WJ402##BK1**

**TD045150WE502##BK1**

**RELATED DOCUMENTS**

General Information

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



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