

RF Power Plate Capacitors for Higher Voltages, Class 1 Ceramic



FEATURES

- Low losses
- High reliability
- High voltage ratings

APPLICATIONS

These high quality power plate capacitors are designed for usage in high frequency heating, welding equipment, and working environments with effects of moisture, dust and other impurities where high voltage ratings are required.

| QUICK REFERENCE DATA | | | | | | | | |
|-----------------------|-------------------------|--------|--------|--------|--------|--------|--------|--------|
| DESCRIPTION | VALUE | | | | | | | |
| Ceramic Class | 1 | | | | | | | |
| Ceramic Dielectric | R7, R16, R42, R85, R230 | | | | | | | |
| Type | PEF 220 | | | | | | | |
| Voltage (V_p) | 12 000 | 13 000 | 14 000 | 15 000 | 16 000 | 17 000 | 18 000 | 20 000 |
| Min. Capacitance (pF) | 400 | 4000 | 300 | 7000 | 250 | 3000 | 500 | 160 |
| Max. Capacitance (pF) | 6000 | 10 000 | 1600 | 8000 | 1200 | 3000 | 500 | 6000 |
| Mounting | Screw terminal | | | | | | | |

MATERIAL

Capacitor elements made from class 1 ceramic dielectric with noble metal electrodes.

Flexible connection terminals copper / brass, silver plated, to allow for series and parallel interconnection.

MARKING

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

FINISH

Noble metal electrodes and terminals are protective lacquered.

The PEF 220 type features an insulating rim made from silicone elastomer to minimize the adverse effects of moisture, dust, and other impurities in the working environment and to improve the characteristics of the electrical field.

CAPACITANCE RANGE

160 pF to 10 nF

CAPACITANCE TOLERANCE

± 20 %, ± 10 %

CERAMIC DIELECTRIC

- 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

- 12 kV_p
- 13 kV_p
- 14 kV_p
- 15 kV_p
- 16 kV_p
- 17 kV_p
- 18 kV_p
- 20 kV_p

DIELECTRIC STRENGTH TEST

200 % of rated voltage, 50 Hz

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)

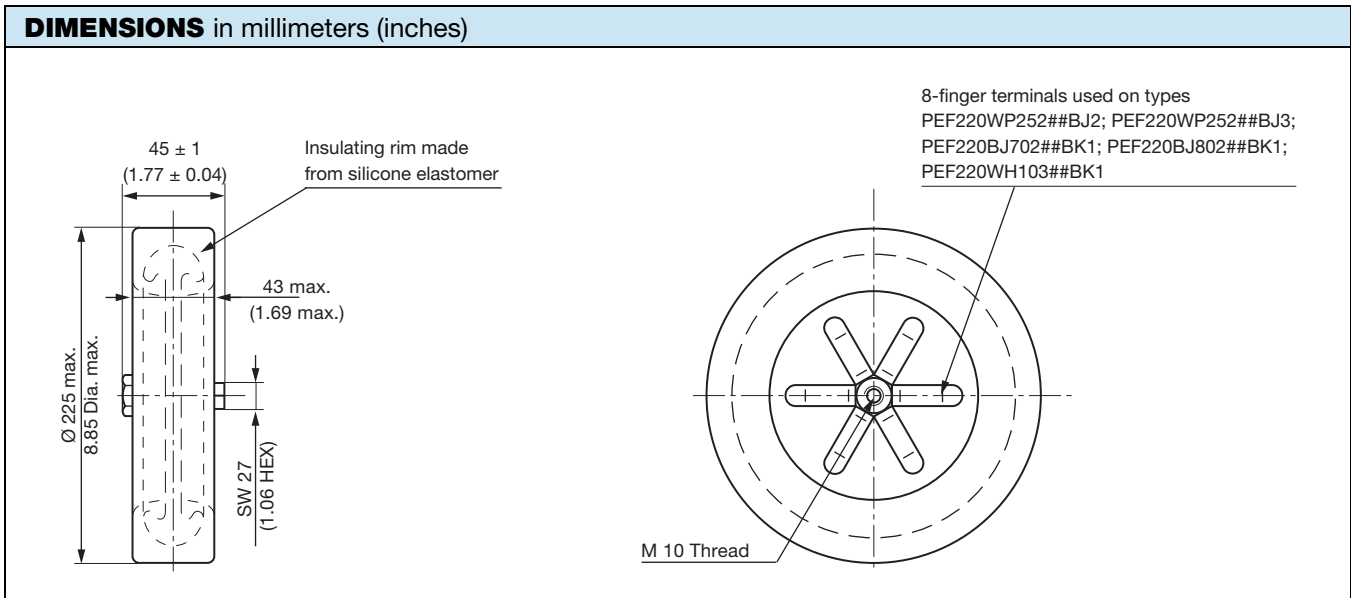
OPERATING TEMPERATURE RANGE

-55 °C to +100 °C

| SAP PART NUMBER AND ELECTRICAL DATA | | | | | | | |
|-------------------------------------|---------|-----------------|----------------------------------|-----------------------------------|-----------------------------------|-----|-----|
| PART NUMBER | CERAMIC | CAP. VALUE (pF) | RATED VOLTAGE (kV _p) | RATED POWER ⁽¹⁾ (kvar) | RATED CURRENT (A _{RMS}) | | |
| PEF220WP161##BF1 | R 7 | 160 | 20 | 110 | 60 | | |
| PEF220WP201##BF1 | | 200 | | | | | |
| PEF220WL251##BF1 | | 250 | 16 | | | | |
| PEF220WJ301##BF1 | | 300 | 14 | | | | |
| PEF220WF401##BF1 | | 400 | 12 | | | | |
| PEF220WN501##BG1 | R 16 | 500 | 18 | 140 | 60 | | |
| PEF220WL601##BG1 | | 600 | 16 | | | | |
| PEF220WP801##BH1 | R 42 | 800 | 20 | 140 | 60 | | |
| PEF220WP102##BH1 | | 1000 | | | | | |
| PEF220WL122##BH1 | | 1200 | 16 | | | | |
| PEF220WJ162##BH1 | | 1600 | 14 | | | | |
| PEF220WP202##BJ1 | R85 | 2000 | 20 | 140 | 60 | | |
| PEF220WP252##BJ1 | | 2500 | | | 100 | | |
| PEF220WP252##BJ3 | | 2500 | | | | | |
| PEF220WP252##BJ2 | | 2500 | | | 125 | | |
| PEF220WM302##BJ1 | | 3000 | 17 | | 60 | | |
| PEF220WH402##BJ1 | | 4000 | | | | | |
| PEF220WH502##BJ1 | | 5000 | 13 | | | | |
| PEF220WF602##BJ1 | | 6000 | | | | | |
| PEF220WP602##BK1 | | R 230 | 6000 | | 20 | 140 | 60 |
| PEF220BJ702##BK1 | | | 7000 | | 15 | | 100 |
| PEF220BJ802##BK1 | 8000 | | | | | | |
| PEF220WH103##BK1 | 10 000 | | 13 | | | | |

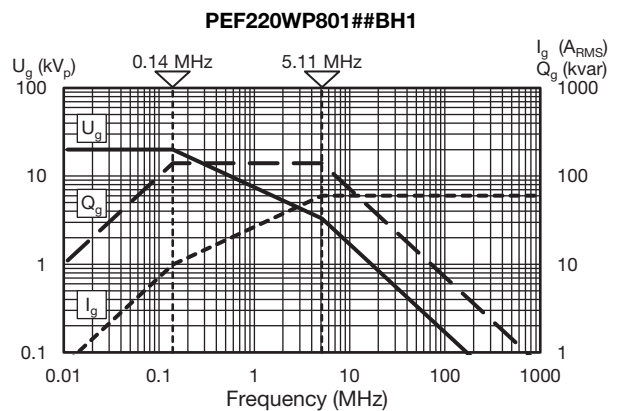
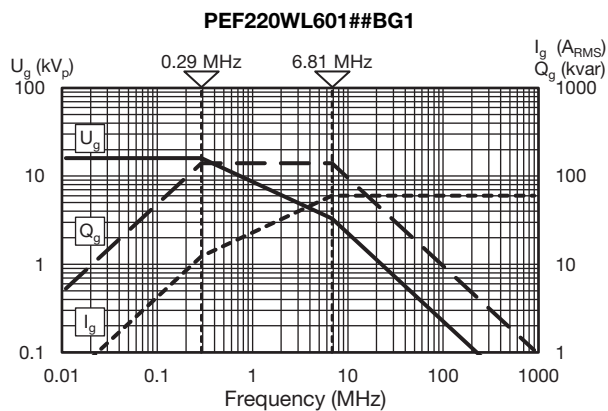
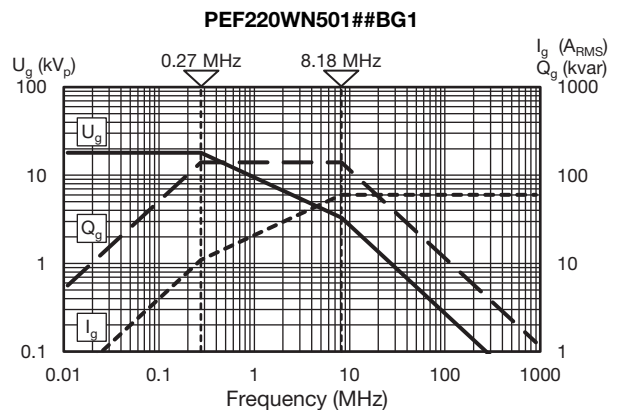
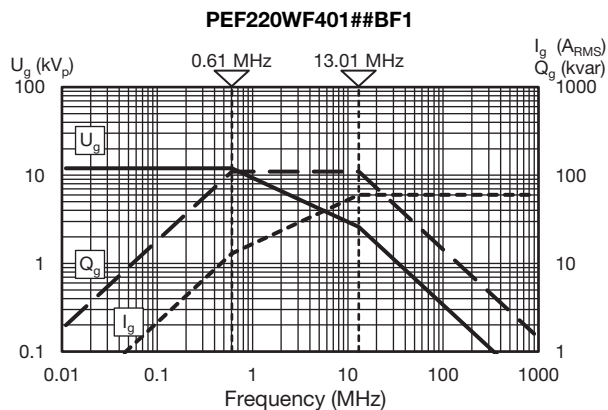
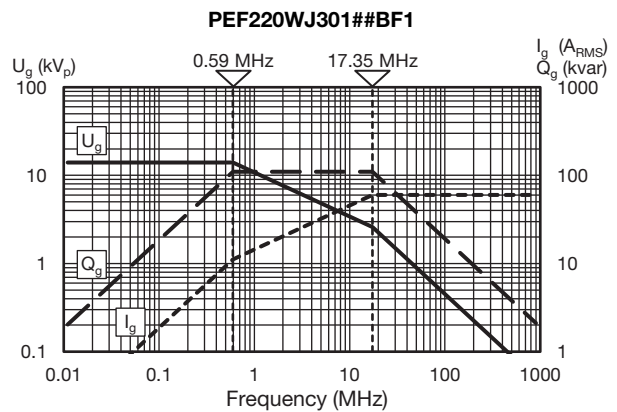
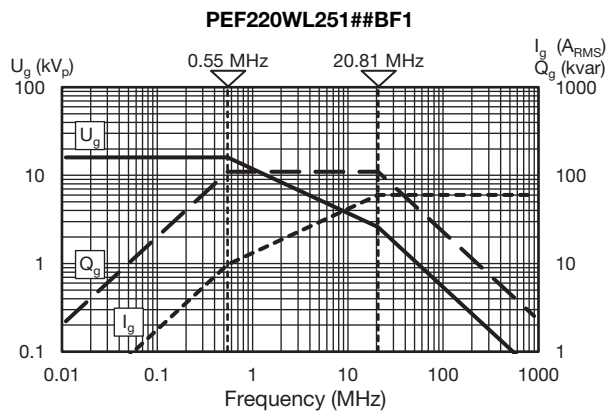
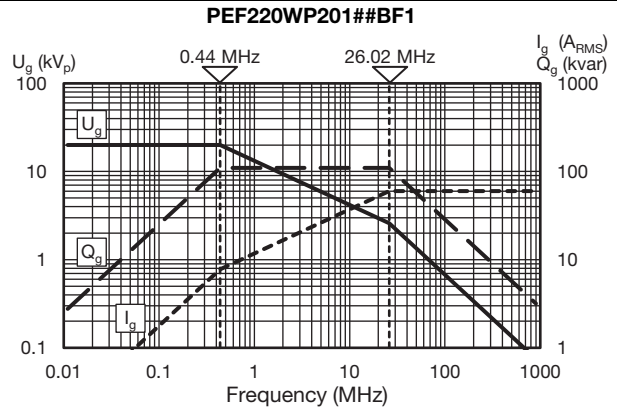
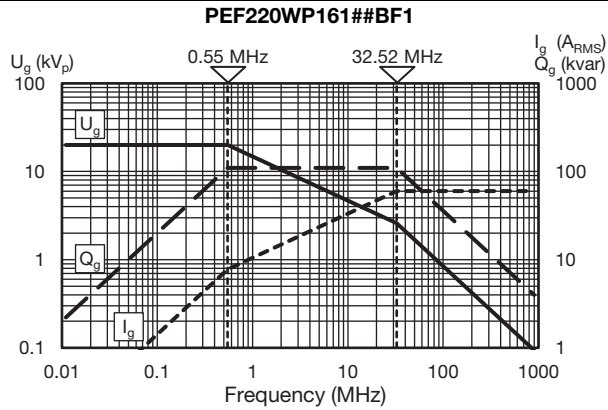
Notes

- ## 14th to 15th digit: capacitance tolerance code $\pm 20\% = 38$, $\pm 10\% = 36$, $\pm 5\% = 33$
- (1) The surface temperature during operation must not exceed +100 °C





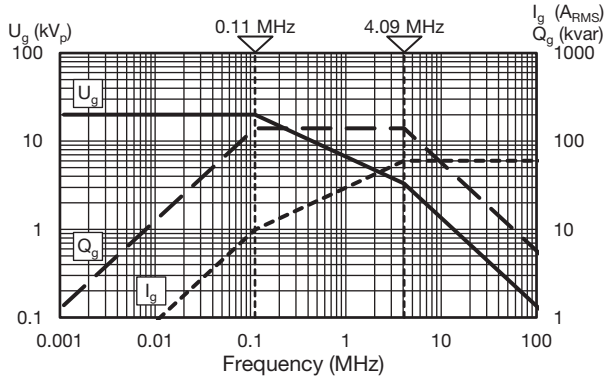
DERATING DIAGRAMS



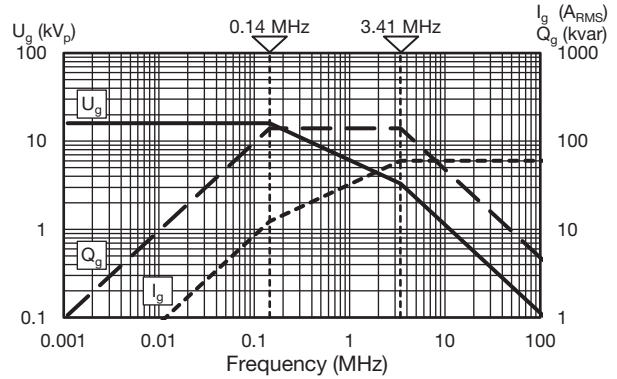


DERATING DIAGRAMS

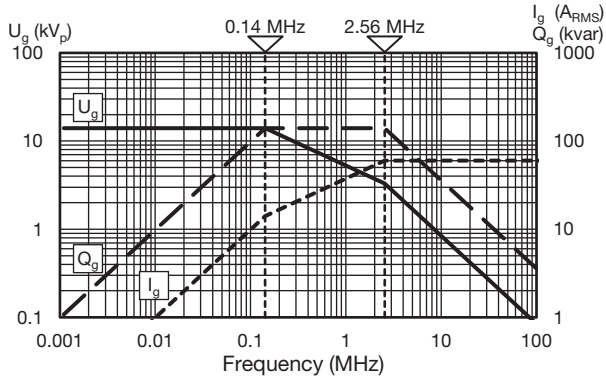
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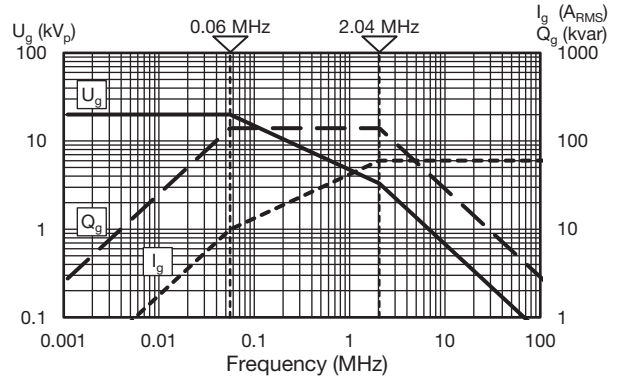
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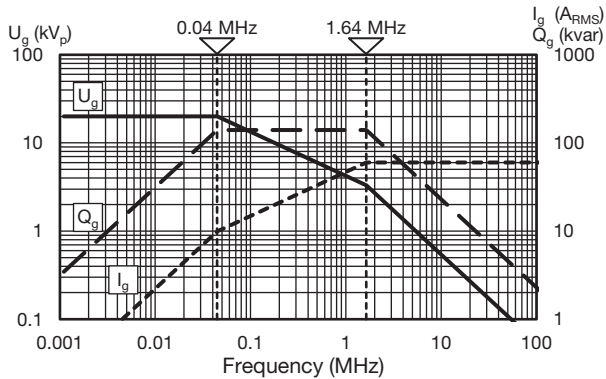
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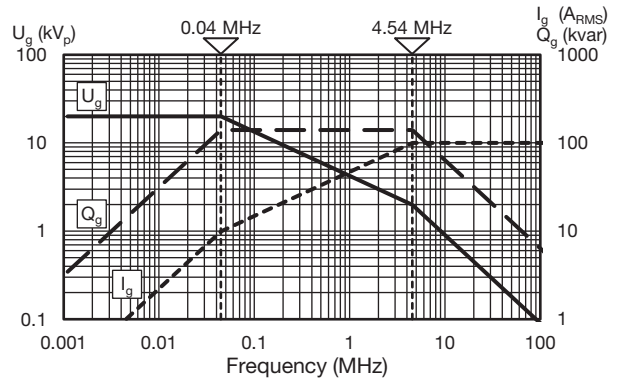
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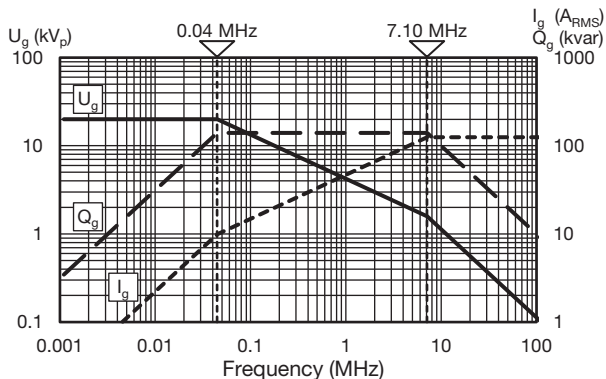
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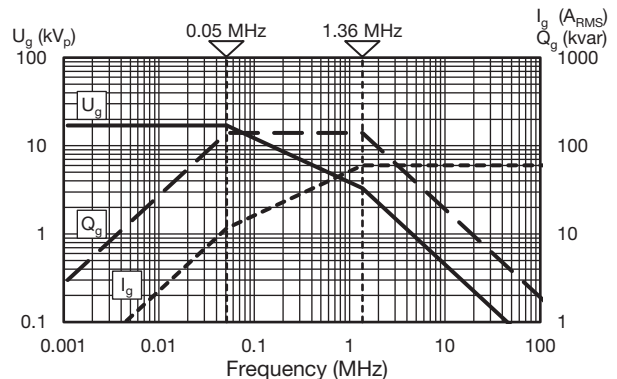
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PEF220WP252##BJ2

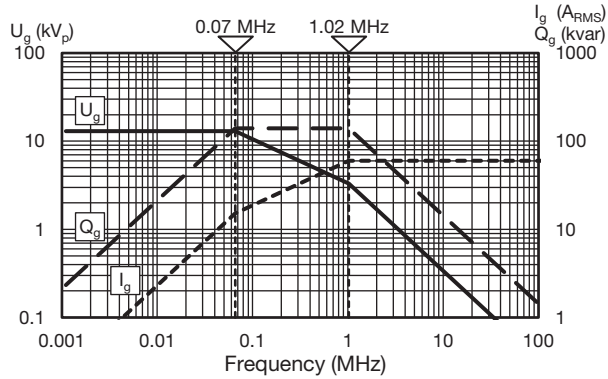


PEF220WM302##BJ1

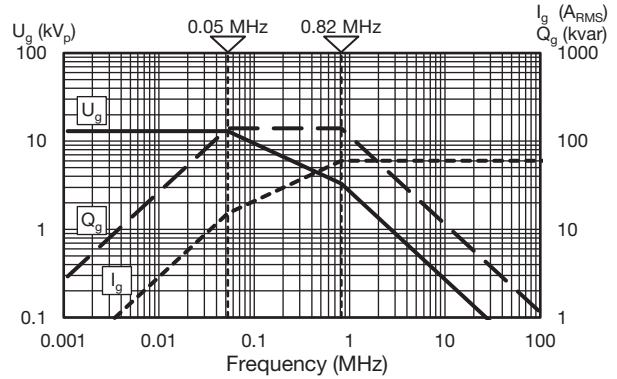


DERATING DIAGRAMS

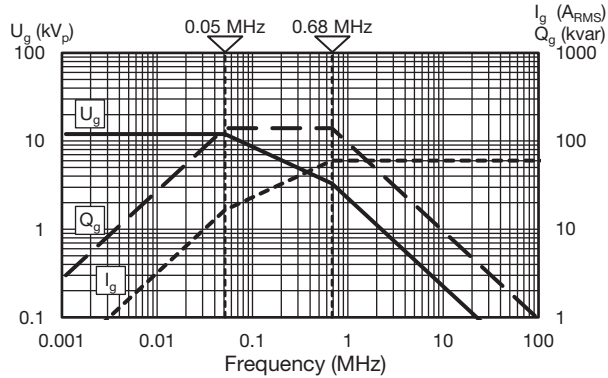
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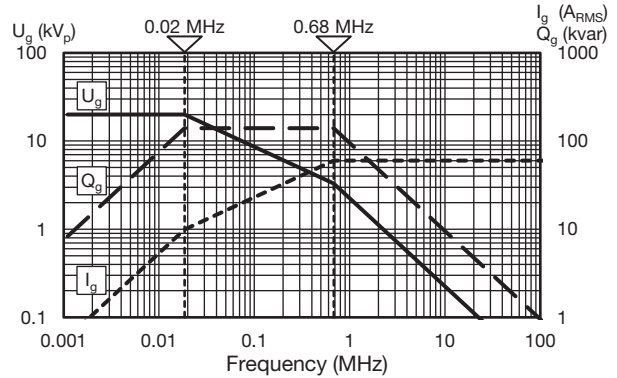
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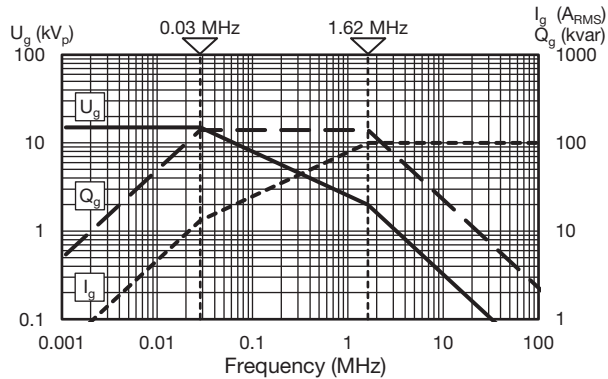
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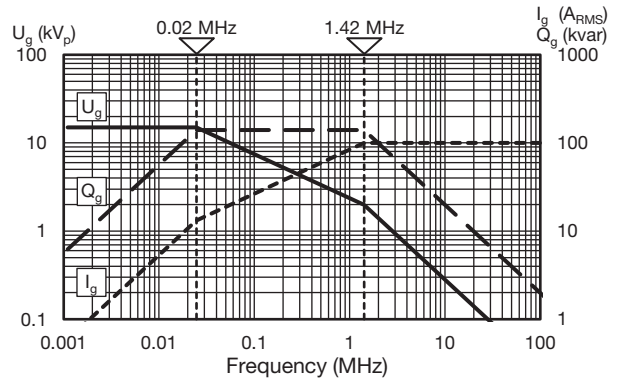
PEF220WP602##BK1



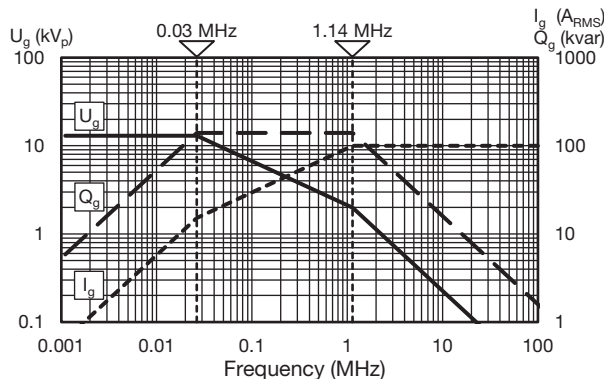
PEF220BJ702##BK1



PEF220BJ802##BK1



PEF220WH103##BK1





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