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

For technical questions, contact: powcap@vishay.com

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SAP PART NUMBER AND ELECTRICAL DATA

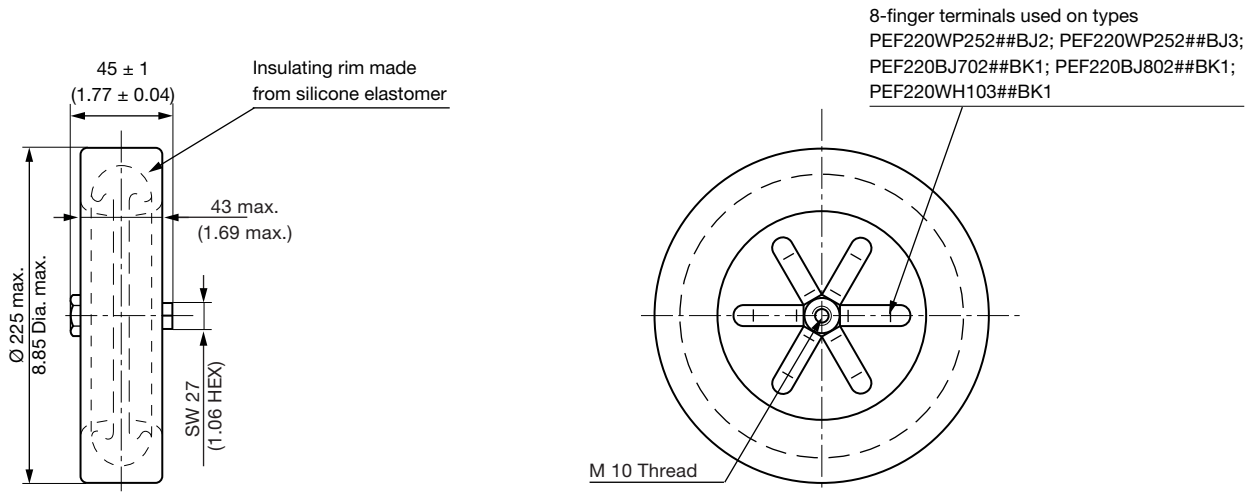
PART NUMBER	CERAMIC	CAP. VALUE (pF)	RATED VOLTAGE (kV_p)	RATED POWER [1] (kvar)	RATED CURRENT (A_{RMS})
PEF220WP161##BF1	R 7	160	20	110	60
PEF220WP201##BF1		200			
PEF220WL251##BF1		250	16		
PEF220WJ301##BF1		300	14		
PEF220WF401##BF1		400	12		
PEF220WN501##BG1	R 16	500	18	140	60
PEF220WL601##BG1		600	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			
PEF220WP252##BJ3		2500			100
PEF220WP252##BJ2		2500			125
PEF220WM302##BJ1		3000	17		60
PEF220WH402##BJ1		4000	13		
PEF220WH502##BJ1		5000			
PEF220WF602##BJ1		6000	12		
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 ± 20 % = 38, ± 10 % = 36

[1] The surface temperature during operation must not exceed +100 °C

DIMENSIONS in millimeters (inches)



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DERATING DIAGRAMS

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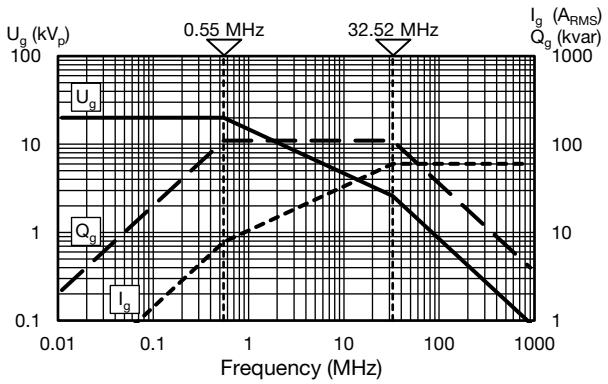

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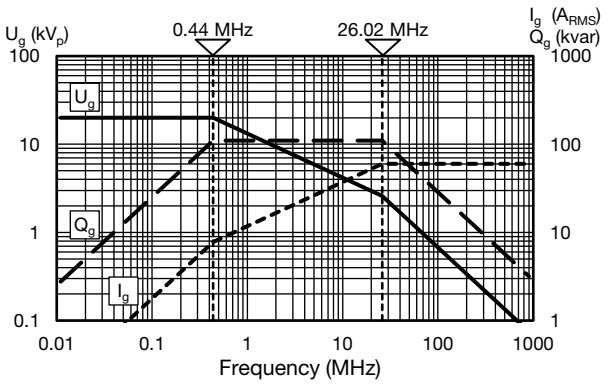

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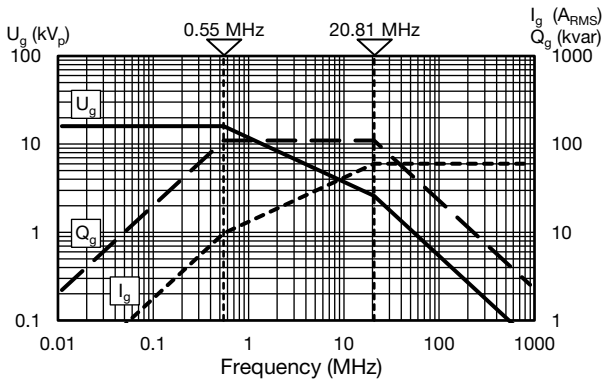

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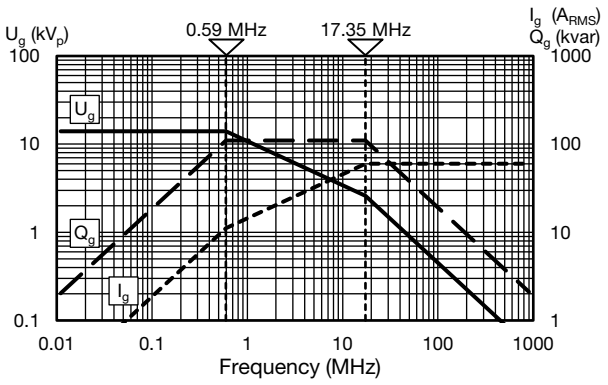

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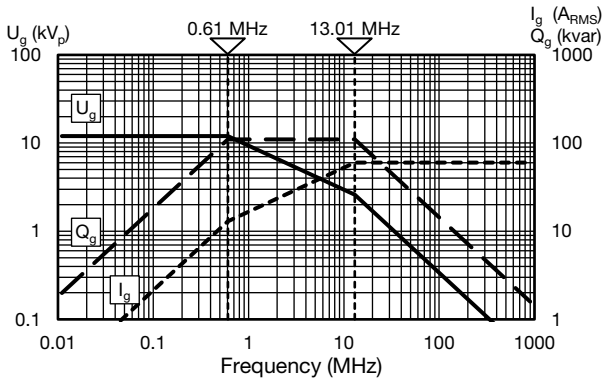

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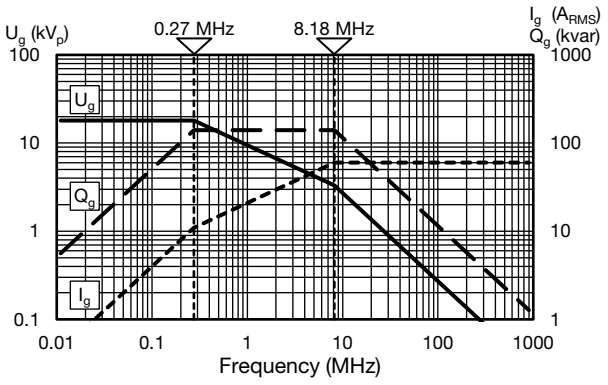

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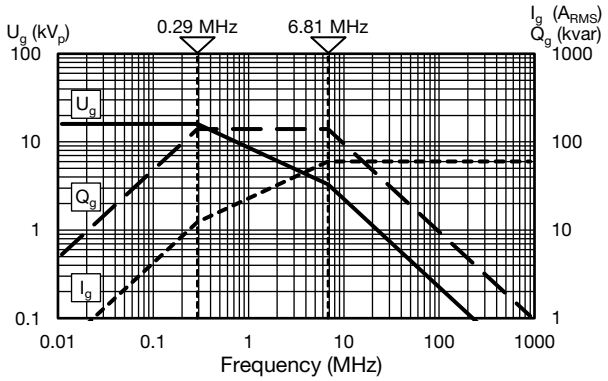

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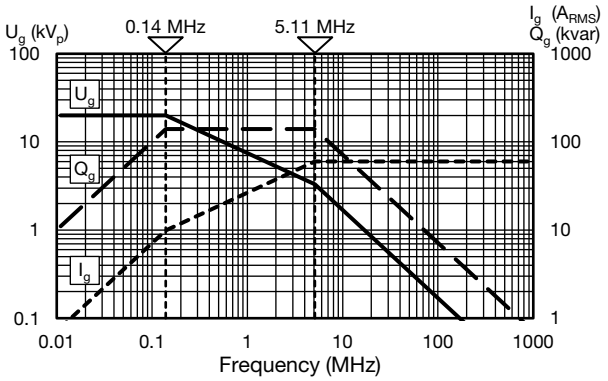

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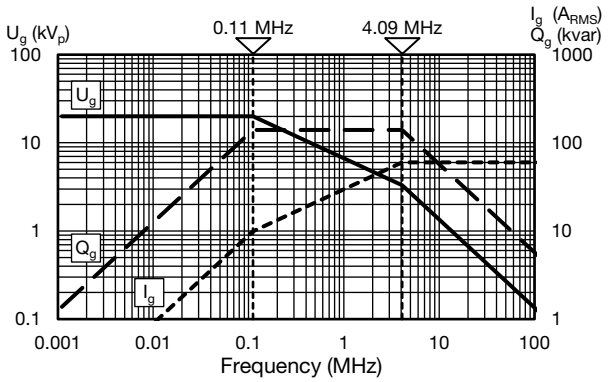

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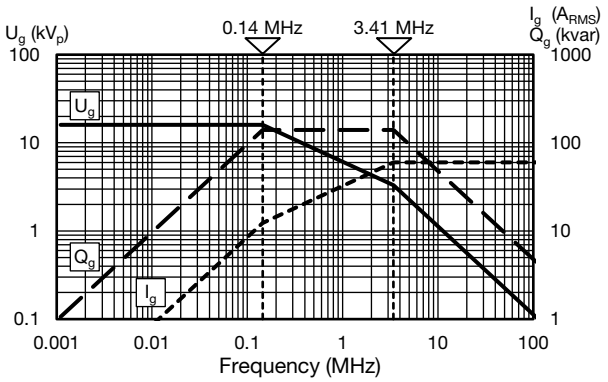

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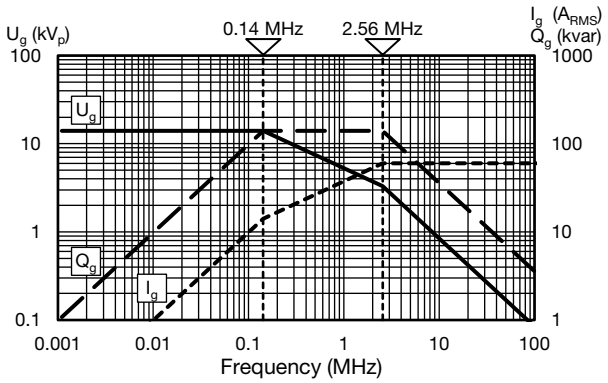

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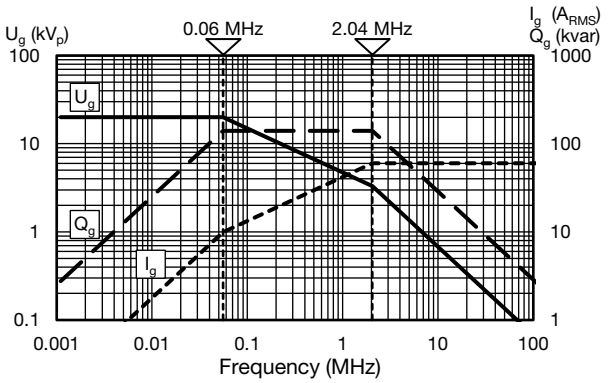

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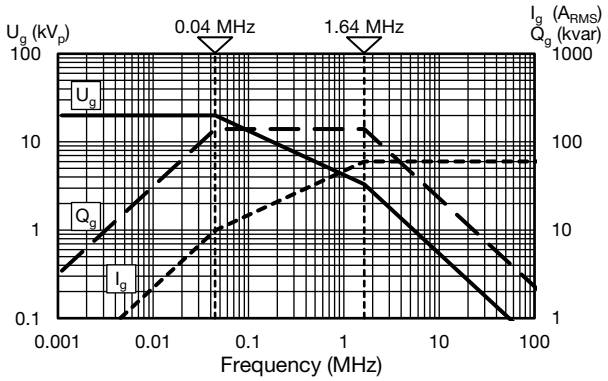

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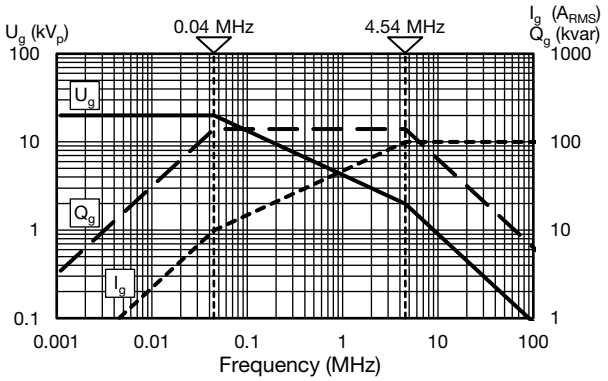

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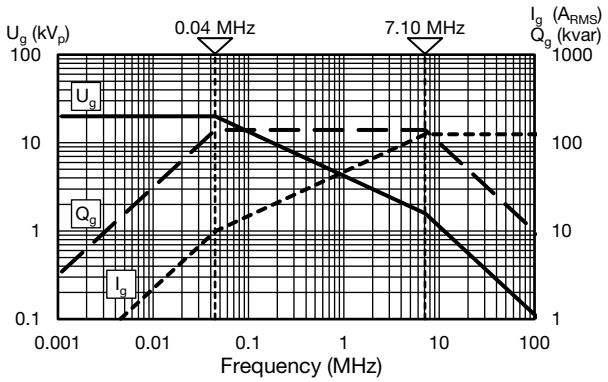

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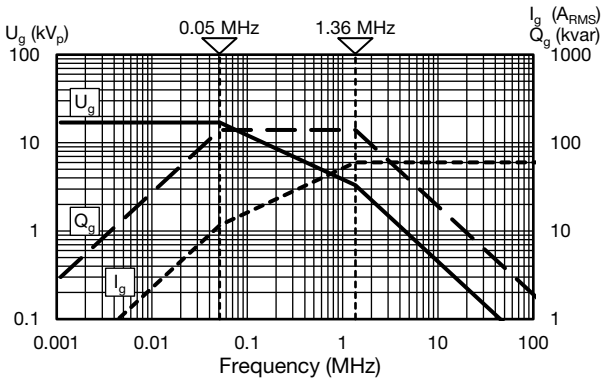

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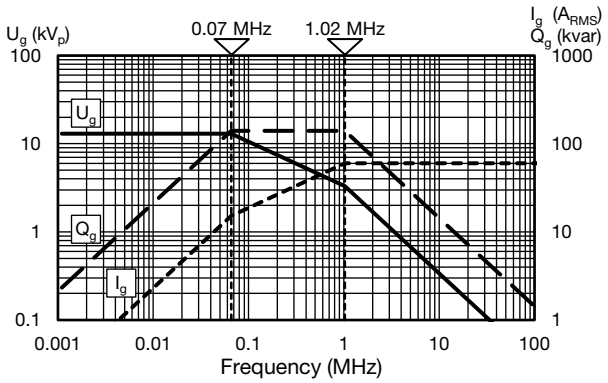

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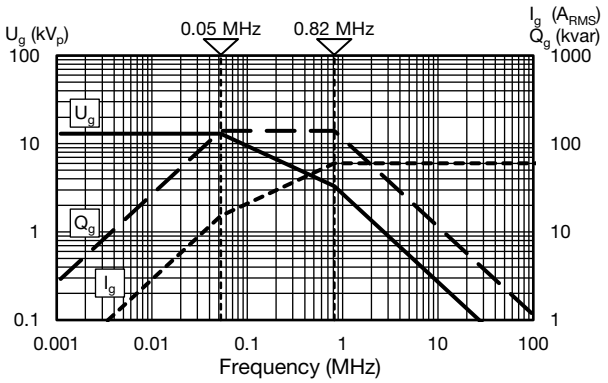

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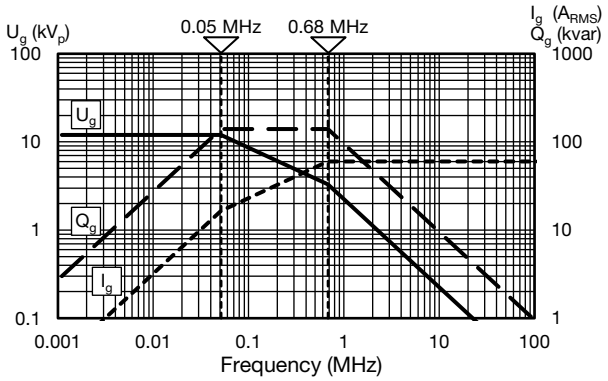

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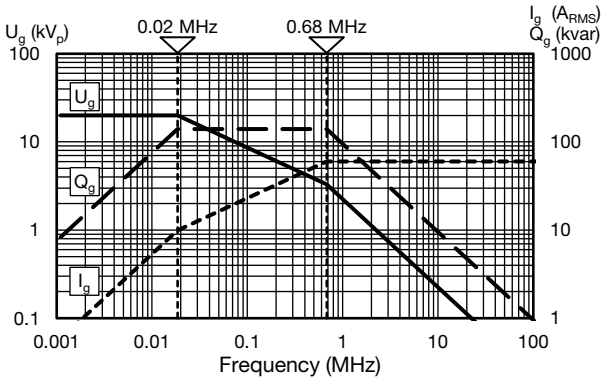

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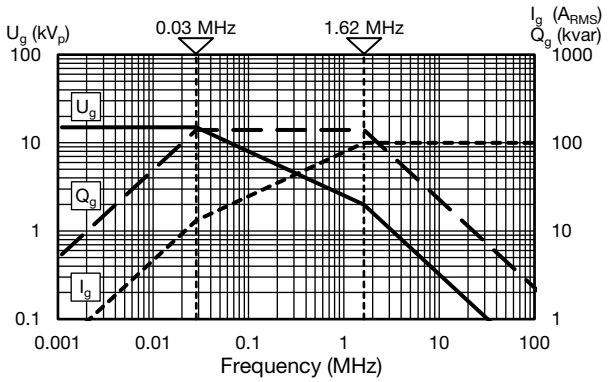

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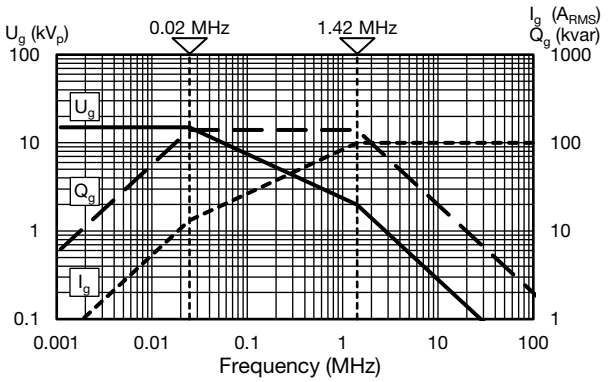

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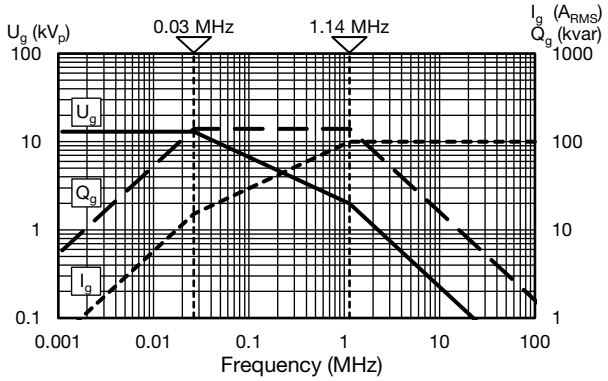

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