

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)

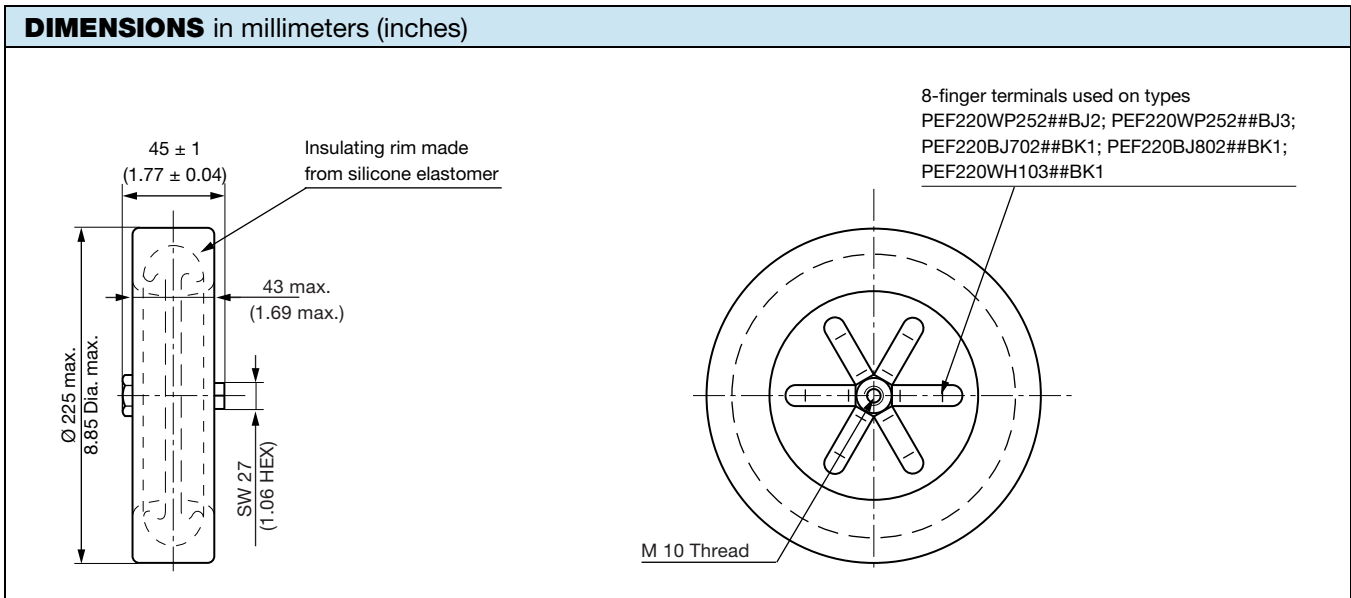
OPERATING TEMPERATURE RANGE

-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			125		
PEF220WP252##BJ2		2500					
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				

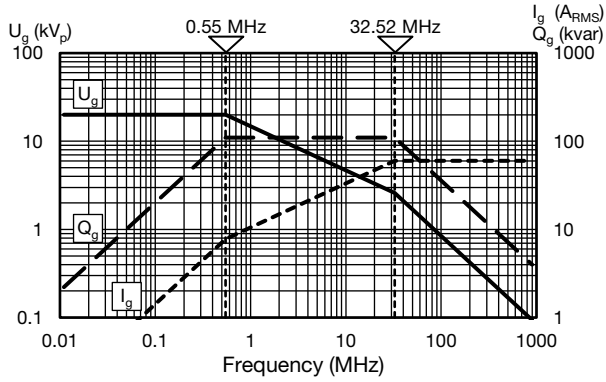
Notes

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

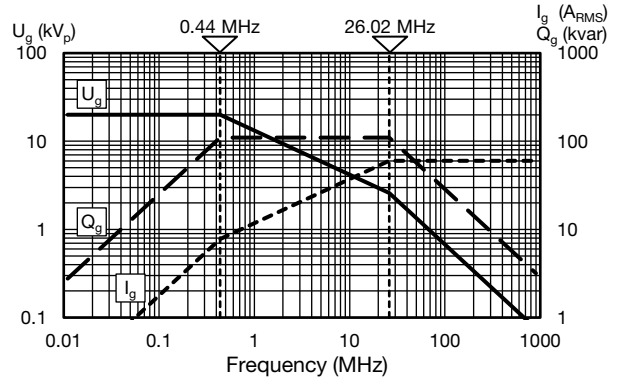


DERATING DIAGRAMS

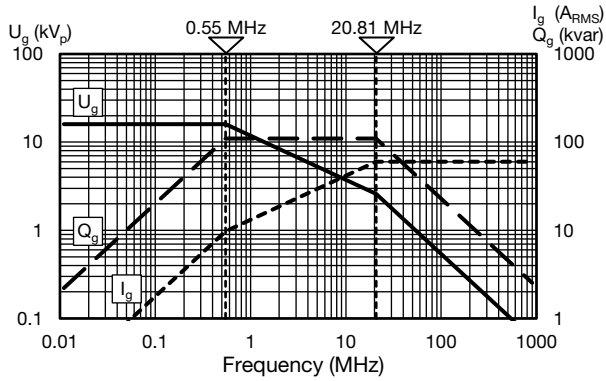
PEF220WP161##BF1



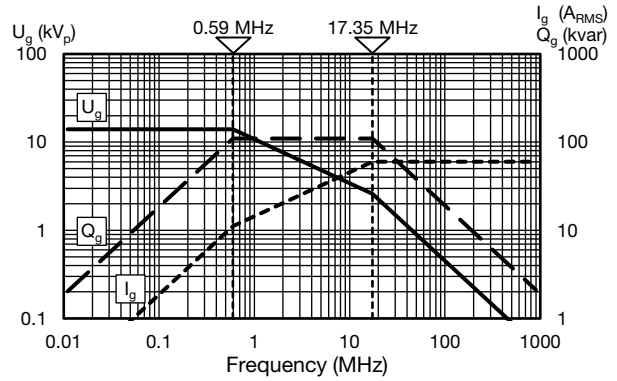
PEF220WP201##BF1



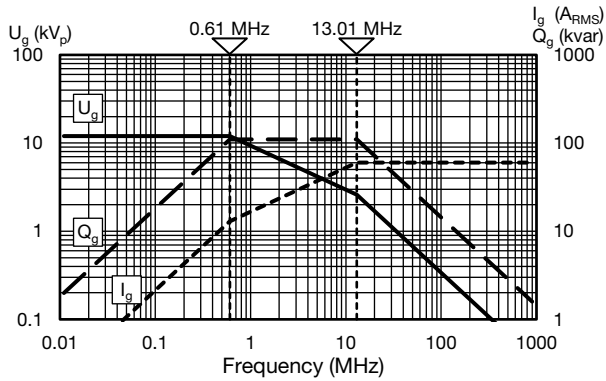
PEF220WL251##BF1



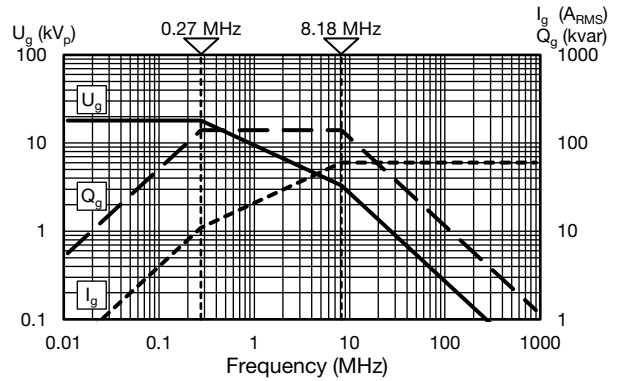
PEF220WJ301##BF1



PEF220WF401##BF1

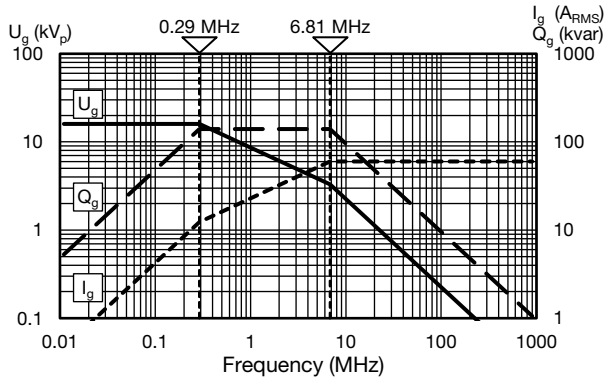


PEF220WN501##BG1

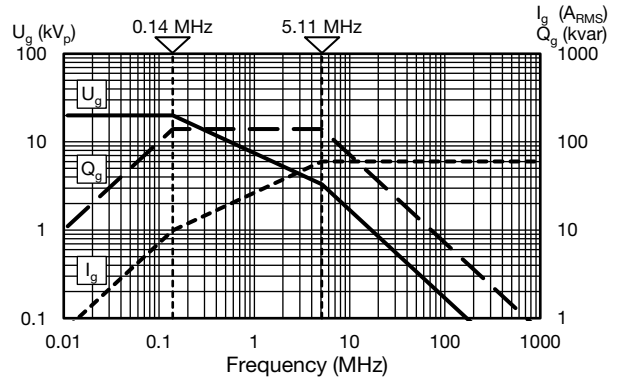


DERATING DIAGRAMS

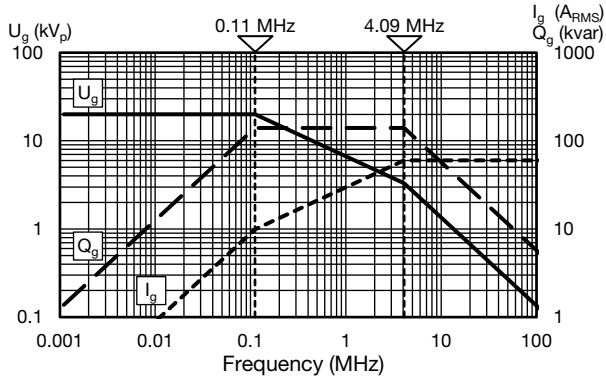
PEF220WL601##BG1



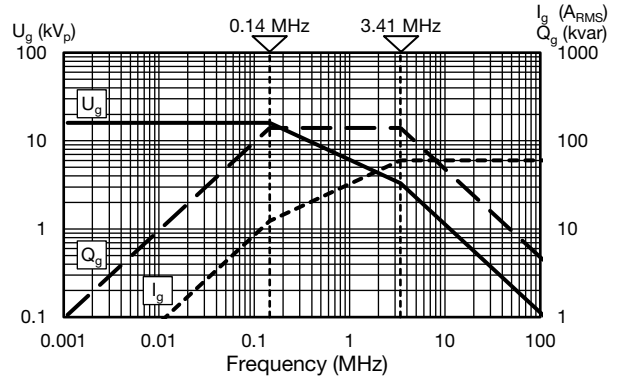
PEF220WP801##BH1



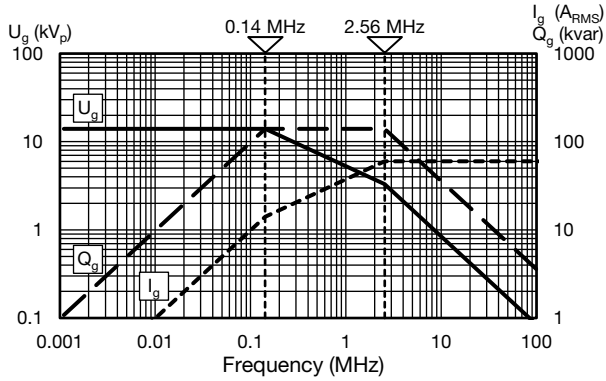
PEF220WP102##BH1



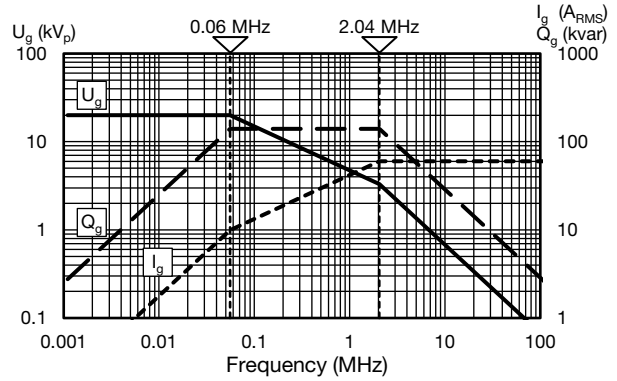
PEF220WL122##BH1



PEF220WJ162##BH1

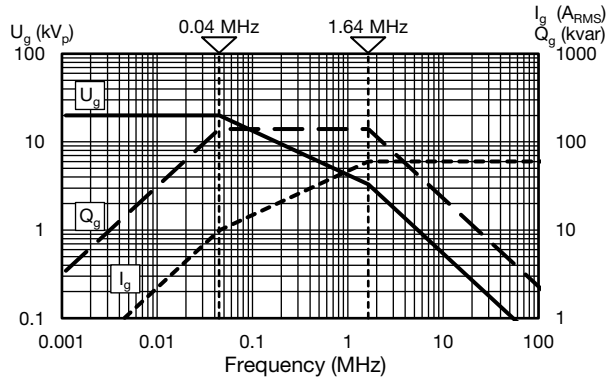


PEF220WP202##BJ1

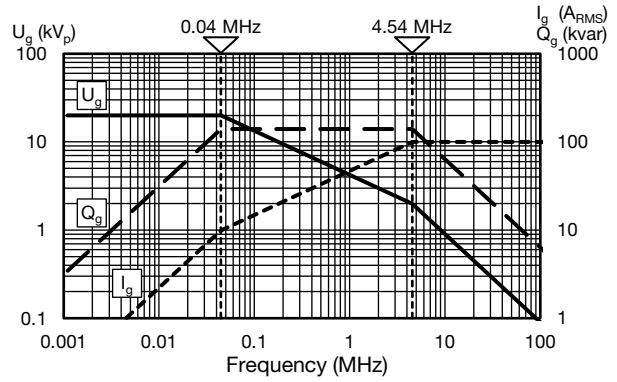


DERATING DIAGRAMS

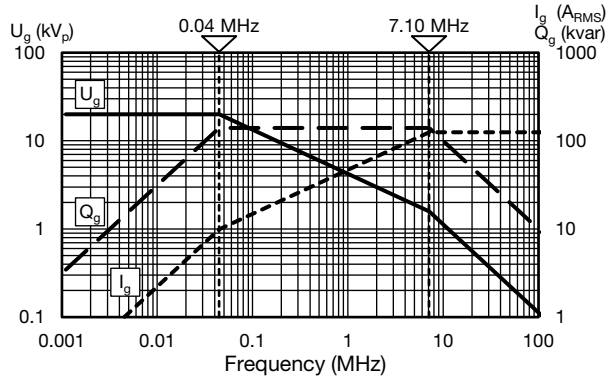
PEF220WP252##BJ1



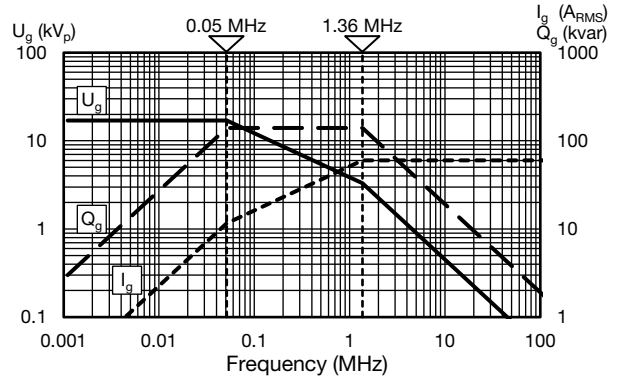
PEF220WP252##BJ3



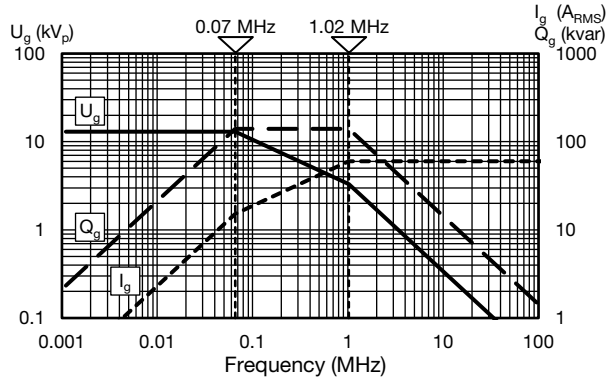
PEF220WP252##BJ2



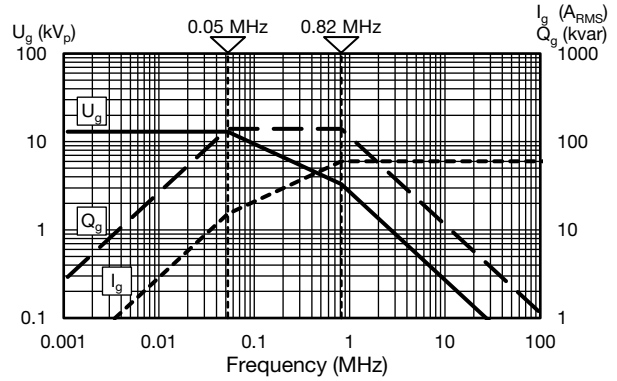
PEF220WM302##BJ1



PEF220WH402##BJ1

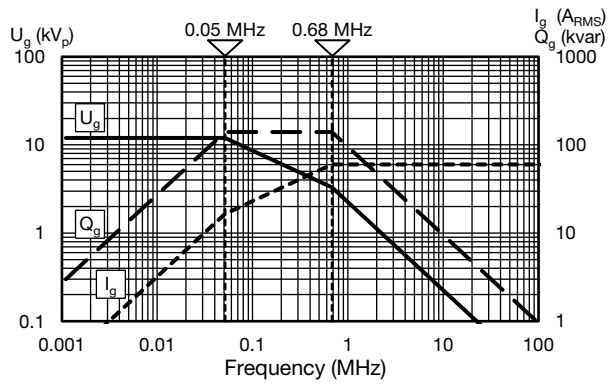


PEF220WH502##BJ1

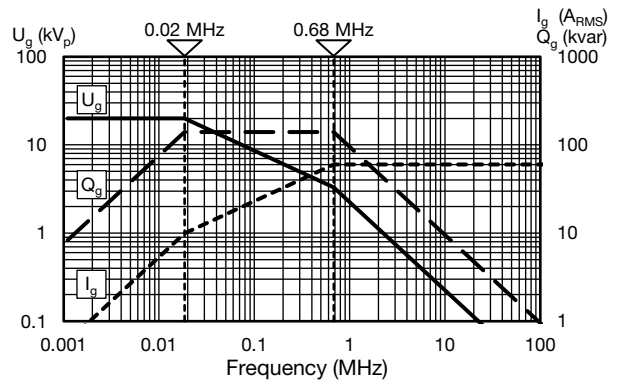


DERATING DIAGRAMS

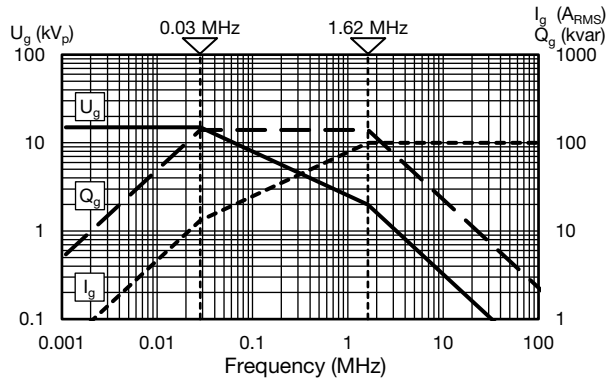
PEF220WF602##BJ1



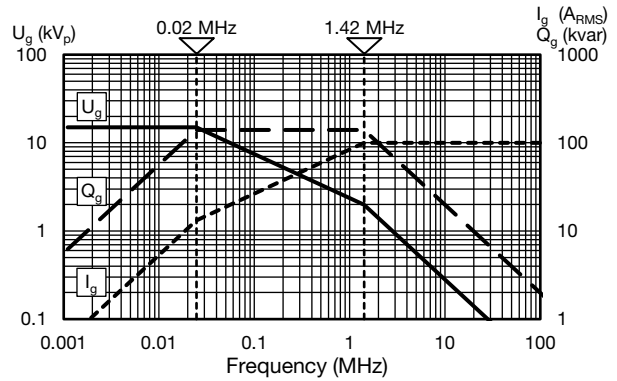
PEF220WP602##BK1



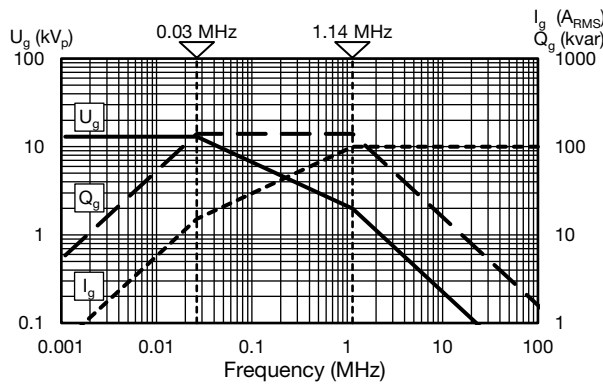
PEF220BJ702##BK1



PEF220BJ802##BK1



PEF220WH103##BK1



RELATED DOCUMENTS

General Information

www.vishay.com/doc?22071



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.