RF Power Feed-Through Capacitors with Conductor Rod, Class 1 Ceramic



QUICK REFERENCE DATA			
DESCRIPTION	VALUE		
Ceramic Class	1		
Ceramic Dielectric	R16, R85, R230	R7, R16, R42, R85	
Type	DB 030088	DB 030100	
Voltage (V_p)	10 000	7000	8000
Min. Capacitance (pF)	150	1500	100
Max. Capacitance (pF)	2500	1500	1200
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 feed-through capacitors are supplied with the necessary nuts and washers to make the connection to the conductor rod.

FEATURES

- Small size
- Geometry minimizes inductance
- Wide range of capacitance values

APPLICATIONS

Filtering purposes in industrial and medical RF power equipment where high voltages and high feed-through currents are required.

CAPACITANCE RANGE

100 pF to 2.5 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_p
- 8.0 kV_p
- 10.0 kV_p

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. 50 000 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 ELECTRIAL DATA

PART NUMBER	CERAMIC	CAP. VALUES (pF)	RATED VOLTAGE (kV_P)	RATED POWER [1] (kvar)	RATED CURRENT (A_{RMS})	FEED-THROUGH CURRENT [2] (A)
TYPE DB 030088						
DB030088BH151##BG1	R16	150	10.0	80.0	30.0	30.0
DB030088BH102##BJ1	R85	1000		60.0		
DB030088BH202##BK1	R230	2000				
DB030088BH252##BK1		2500				
TYPE DB 030100						
DB030100BP101##BF1	R7	100	8.0	30.0	30.0	30.0
DB030100BP121##BG1	R16	120				
DB030100BP161##BG1		160				
DB030100BP201##BG1		200				
DB030100BP251##BH1	R42	250				
DB030100BP301##BH1		300				
DB030100BP401##BH1		400				
DB030100BP501##BH1		500				
DB030100BP601##BJ1	R85	600				
DB030100BP801##BJ1		800				
DB030100BP102##BJ1		1000				
DB030100BP122##BJ1		1200				
DB030100VY152##BJ1		1500	7.0			

Notes

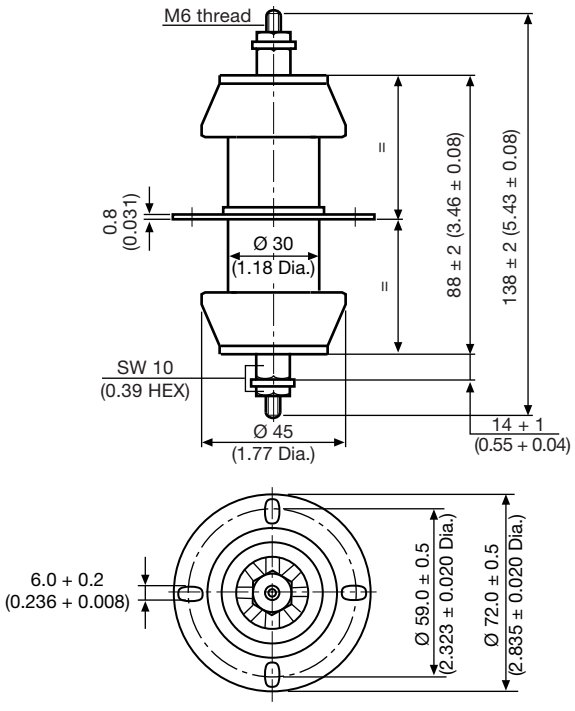
- ## 14th to 15th digit: capacitance tolerance code ± 20 % = 38, ± 10 % = 36, ± 5 % = 33

(1) The surface temperature during operation must not exceed +100 °C

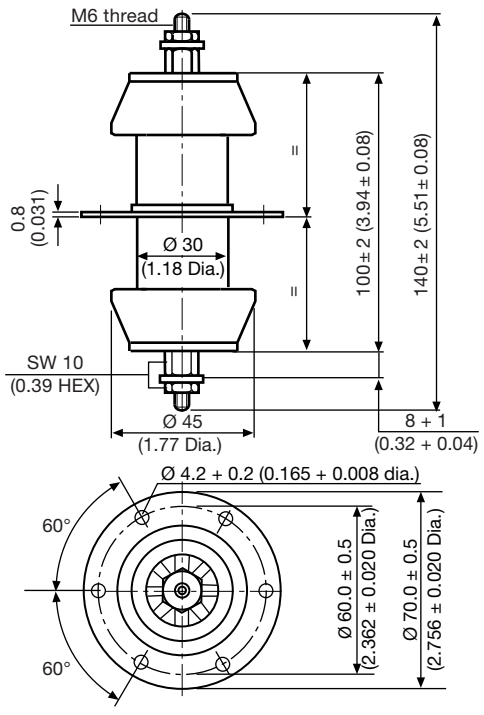
(2) DC or low frequency RMS current (< 20 kHz)

DIMENSIONS in millimeters (inches)

DB 030088



DB 030100



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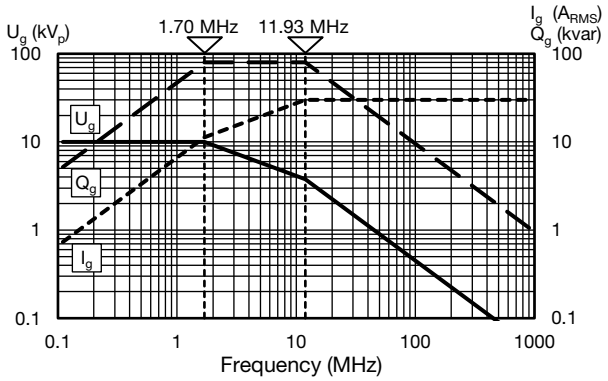
MOUNTING GUIDELINES

- The connection to one electrode must be flexible in order to prevent the generation of physical force which could damage the capacitor elements. Such forces are often generated by the dimensional differences resulting from the normal physical tolerances of these components.
- The capacitor elements must not be used as a mechanical support for other devices or components.
- Use two wrenches when tightening the nuts on both sides of the conductor rod.
  The outer electrode terminal flange of these feed-through capacitors components should be fixed after tightening the inner electrode's connection.
- Make sure that not too much force applied to the solder connections between hardware and noble metal electrode. A torque less than 5 Nm is recommended.

DERATING DIAGRAMS

DB030088BH151##BG1



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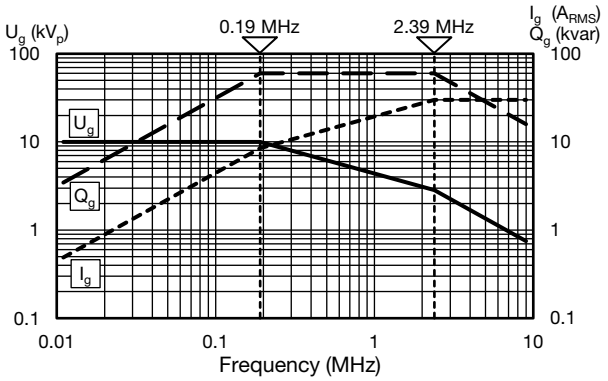

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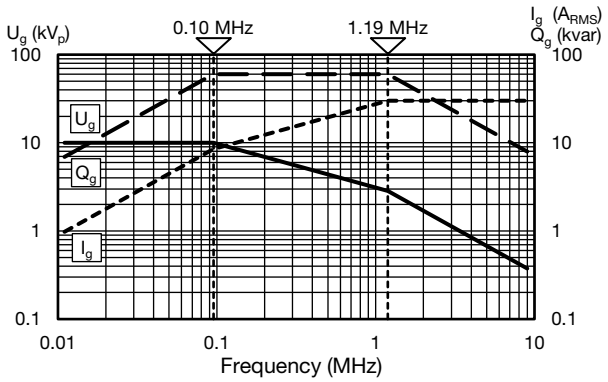

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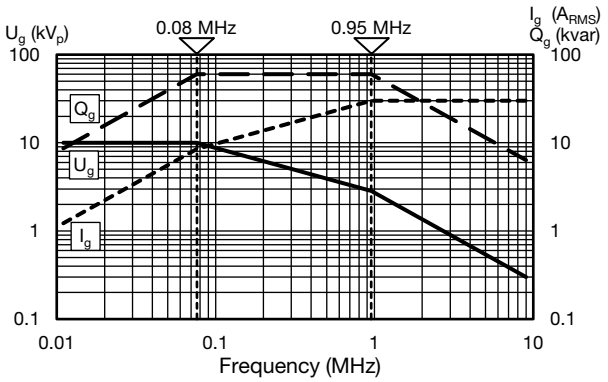

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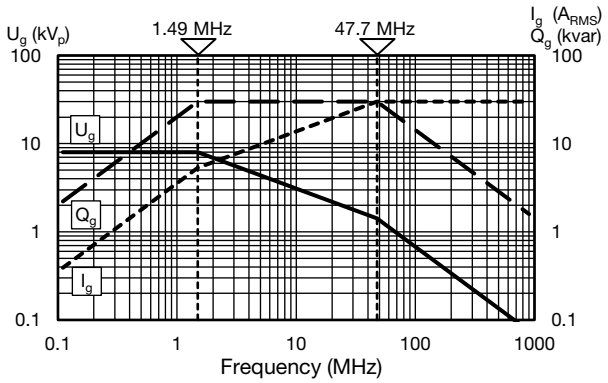

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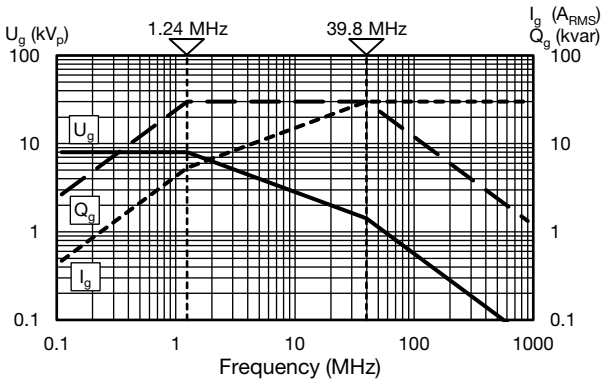

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DERATING DIAGRAMS

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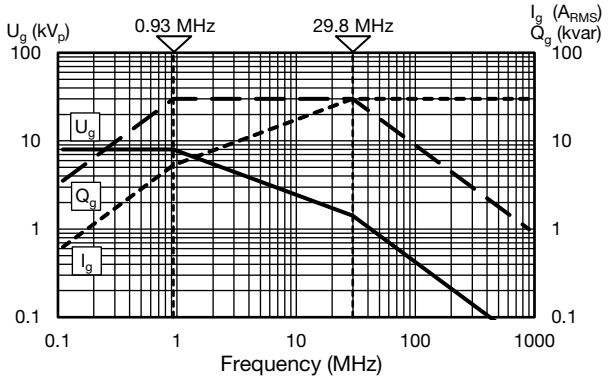

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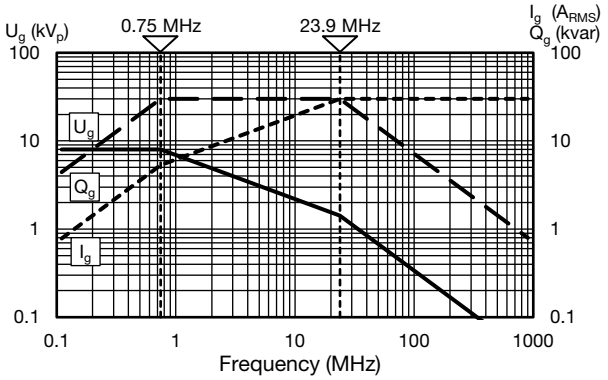

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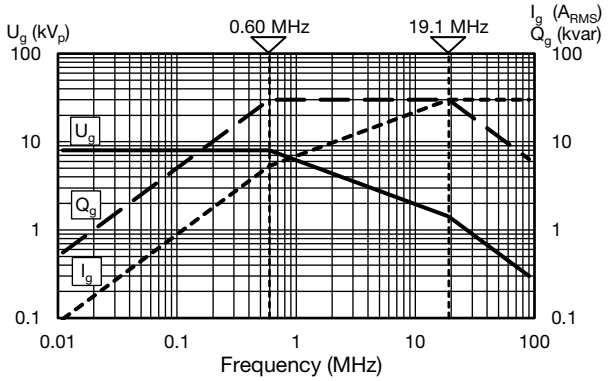

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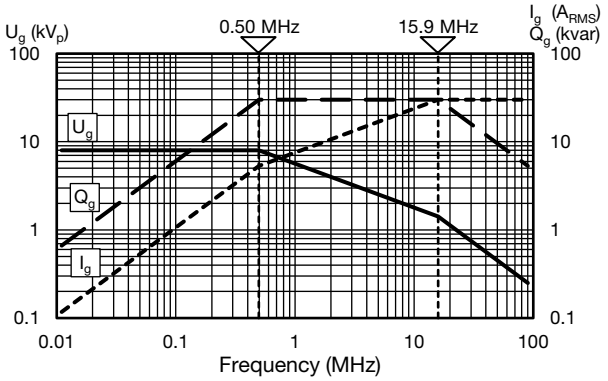

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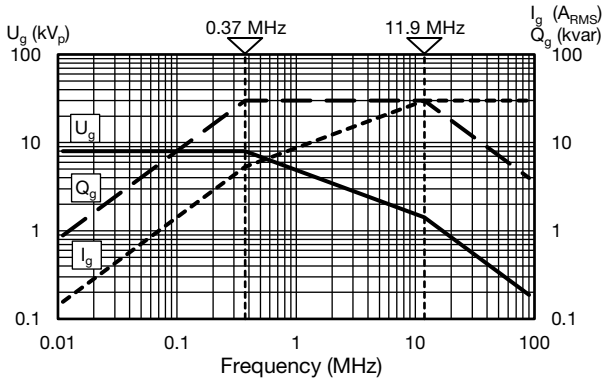

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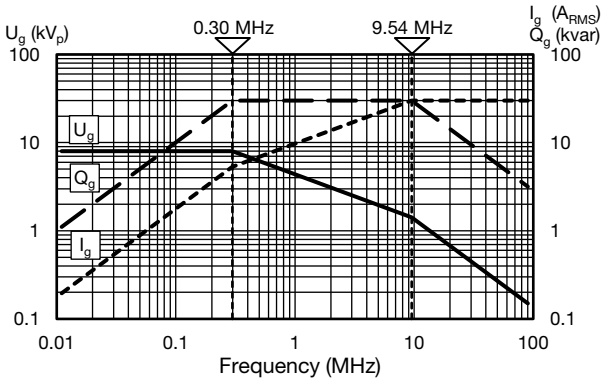

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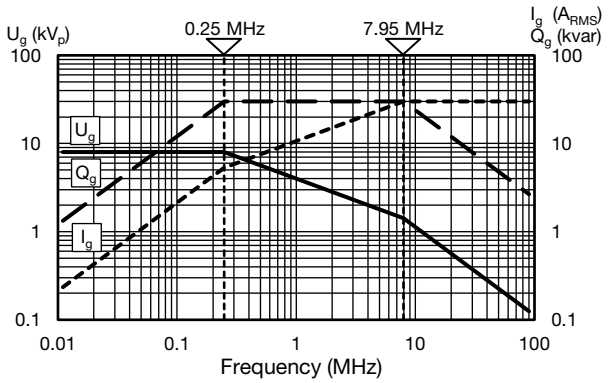

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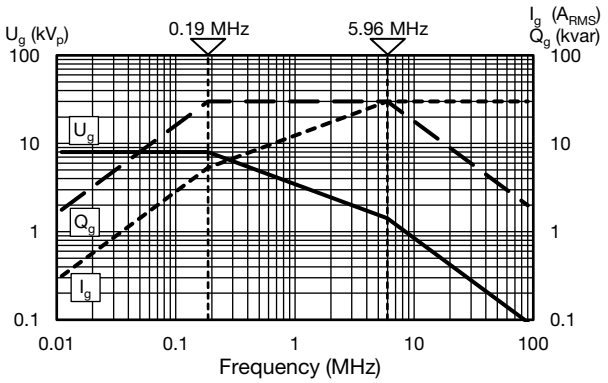

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DERATING DIAGRAMS

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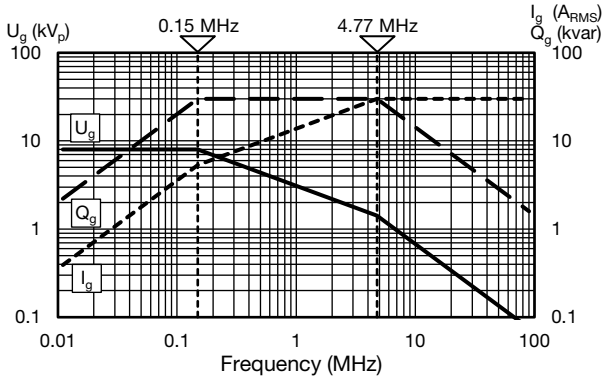

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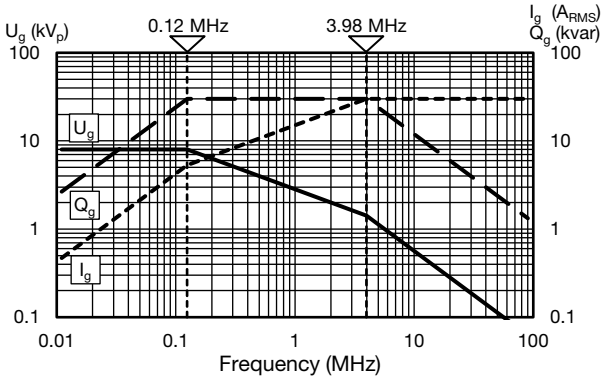

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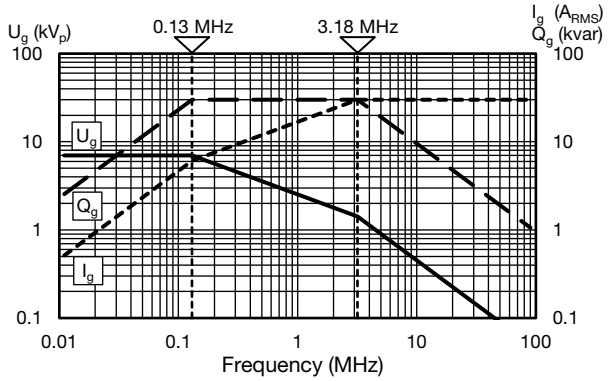

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