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



QUICK REFERENCE DATA				
DESCRIPTION	VALUE			
Ceramic Class	1			
Ceramic Dielectric	R85	R85	R85, R230	
Type	DB 016030	DB 016040	DB 016060	
Voltage (V_p)	3000	3000	3000	4000
Min. Capacitance (pF)	200	500	1000	800
Max. Capacitance (pF)	600	800	2500	800
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.

MARKING

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

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

200 pF to 2.5 nF

CAPACITANCE TOLERANCE

± 20 %; ± 10 %; ± 5 %

CERAMIC DIELECTRICS

- R85 (TCC - 750 ppm/K)
- R230 (TCC - 750 ppm/K)

RATED VOLTAGE

- 3.0 kV_p
- 4.0 kV_p

DIELECTRIC STRENGTH TEST

200 % of rated AC voltage (50 Hz, 5 minutes)

DISSIPATION FACTOR

Max. 0.05 %

Measuring frequencies:
1 MHz (< 1 nF); 300 kHz or 100 kHz (≥ 1 nF)

INSULATION RESISTANCE

Min. 10 000 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. VALUES (pF)	RATED VOLTAGE (kV_P)	RATED POWER (1) (kvar)	RATED CURRENT (A_{RMS})	FEED-THROUGH CURRENT (2) (A)
TYPE DB 016030						
DB016030BC201##BJ1	R85	200	3.0	4.0	5.0	10.0
DB016030BC401##BJ1		400				
DB016030BC601##BJ1		600				
TYPE DB 016040						
DB016040BC501##BJ1	R85	500	3.0	5.0	5.0	10.0
DB016040BC701##BJ1		700				
DB016040BC801##BJ1		800				
TYPE DB 016060						
DB016060BD801##BJ1	R85	800	4.0	7.5	5.0	10.0
DB016060BC102##BJ1		1000	3.0			
DB016060BC122##BJ1		1200				
DB016060BC152##BJ1		1500				
DB016060BC252##BK1	R230	2500				

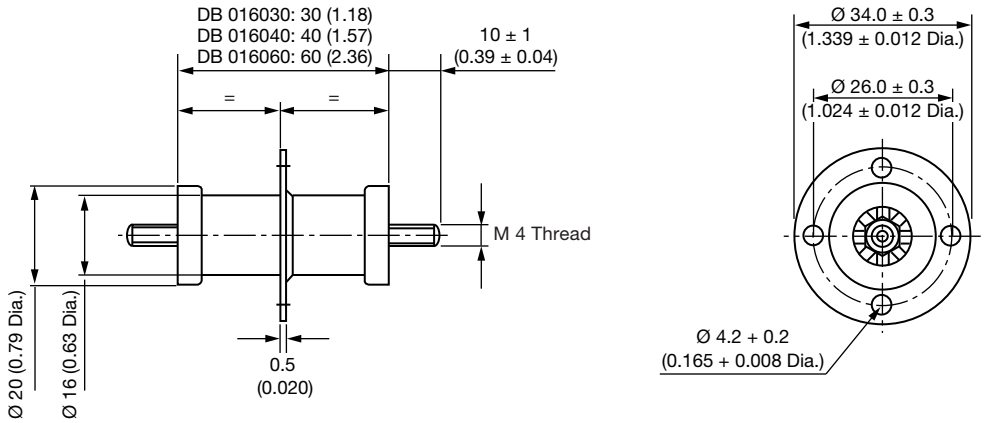
Notes

- ## 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)



MOUNTING GUIDELINES

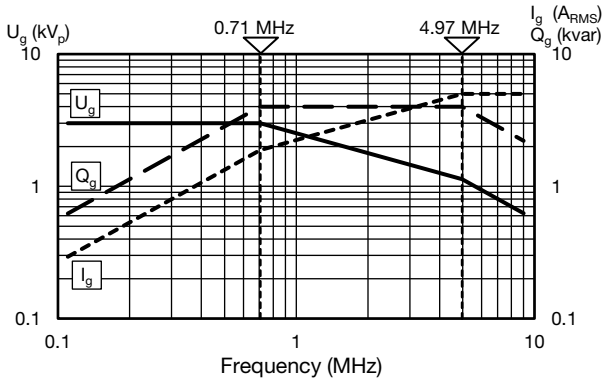
- The connection to one electrode must be flexible in order to prevent the generation of physical force which could damage the capacitor elements. Such forces are often generated by the dimensional differences resulting from the normal physical tolerances of these components.
- The capacitor elements 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 3.5 Nm (31 lbf in) is recommended.

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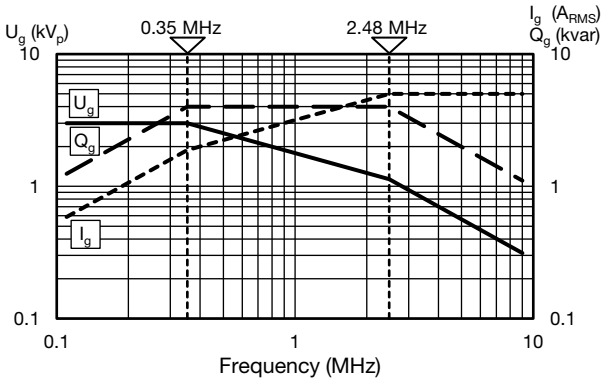
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DERATING DIAGRAMS

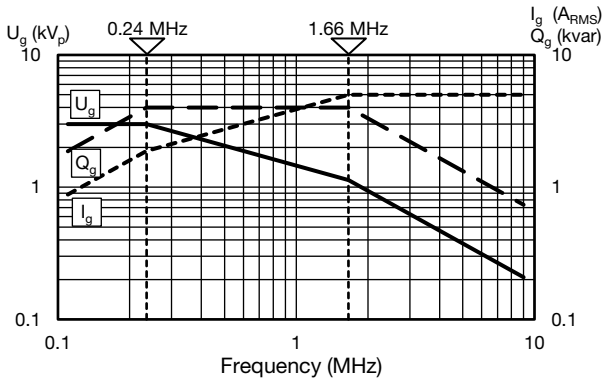
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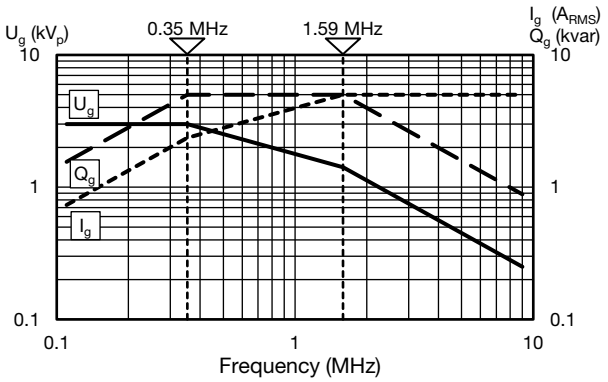
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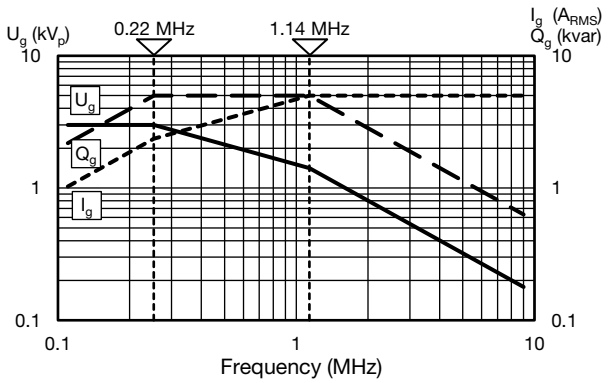
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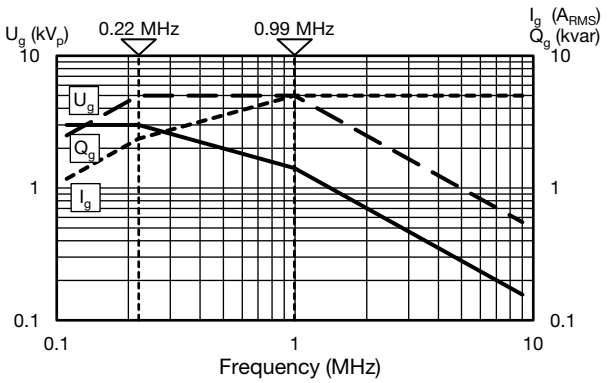
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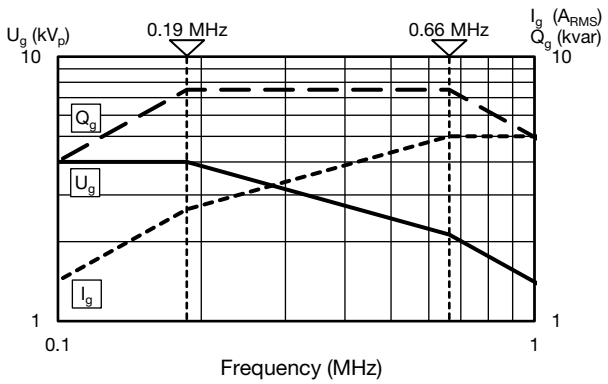
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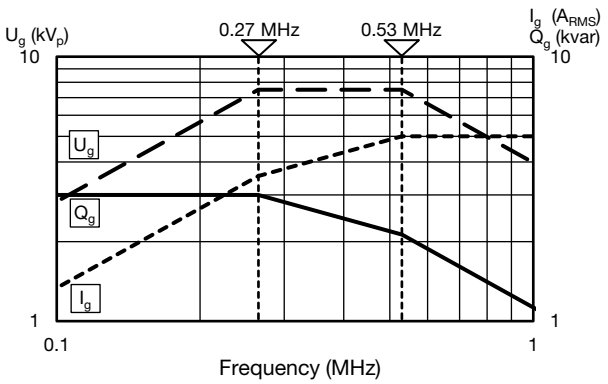
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DB016060BD801##BJ1



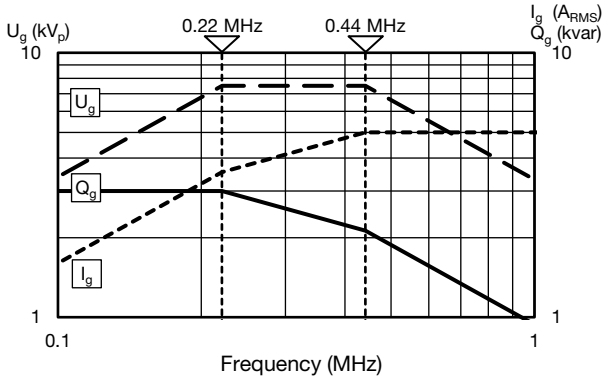
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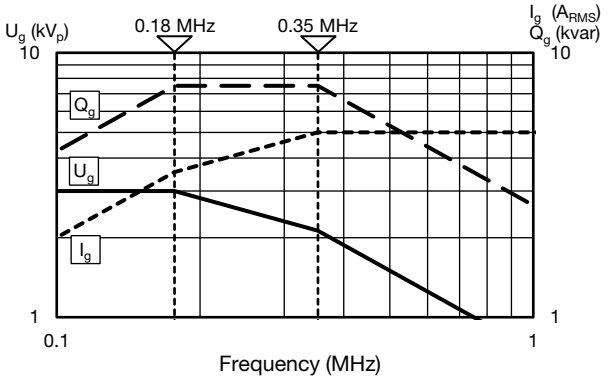
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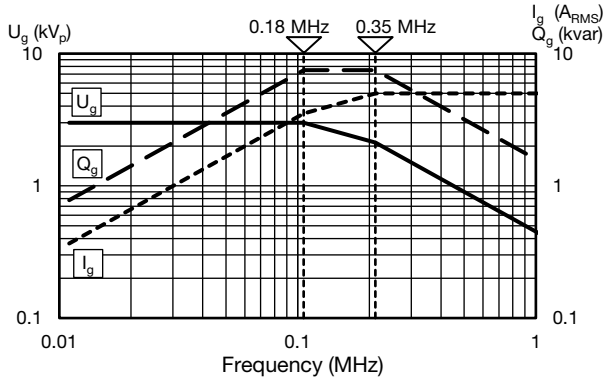
DB016060BC122##BJ1



DB016060BC152##BJ1



DB016060BC252##BK1



RELATED DOCUMENTS

General Information	www.vishay.com/doc?22071

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