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

QUICK REFERENCE DATA			
DESCRIPTION	VALUE		
Ceramic Class	1		
Ceramic Dielectric	R16, R42, R85, R230		R85, R230
Type	DB 045120		DB 045155
Voltage (V_p)	10 000	11 000	14 000
Min. Capacitance (pF)	800	200	1000
Max. Capacitance (pF)	4700	3000	2700
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

- Geometry minimizes inductance
- Wide range of capacitance values
- High feed-through currents

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 4.7 nF

CAPACITANCE TOLERANCE

± 20 %; ± 10 %; ± 5 %

CERAMIC DIELECTRICS

- R16 (TCC + 100 ppm/K)
- R42 (TCC - 250 ppm/K)
- R85 (TCC - 750 ppm/K)
- R230 (TCC - 750 ppm/K)

RATED VOLTAGE

- 10 kV_p
- 11 kV_p
- 14 kV_p

DIELECTRIC STRENGTH TEST

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

DISSIPATION FACTOR

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. 10 000 MΩ (at 25 °C)

OPERATING TEMPERATURE RANGE

-55 °C to +100 °C

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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 045120						
DB045120WE201##BG1	R16	200	11.0	60.0	50.0	50.0
DB045120WE251##BG1		250				
DB045120WE301##BG1		300				
DB045120WE401##BH1	R42	400				
DB045120WE501##BH1		500				
DB045120WE601##BH1		600				
DB045120BH801##BH1		800	10.0			
DB045120WE102##BJ1	R85	1000	11.0			
DB045120WE122##BJ1		1200				
DB045120BH152##BJ1		1500	10.0			
DB045120WE202##BK1	R230	2000	11.0			
DB045120WE252##BK1		2500				
DB045120WE302##BK1		3000				
DB045120BH472##BK1		4700	10.0			
TYPE DB 045155						
DB045155WJ102##BJ1	R85	1000	14.0	56.0	25.0	50.0
DB045155WJ272##BK1	R230	2700				

Notes

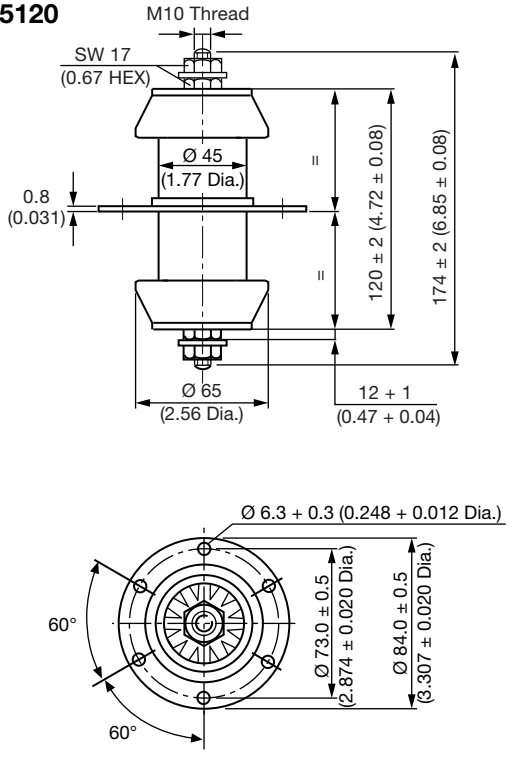
- ## 14th to 15th digit: capacitance tolerance code ± 20 % = 38, ± 10 % = 36, ± 5 % = 33

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

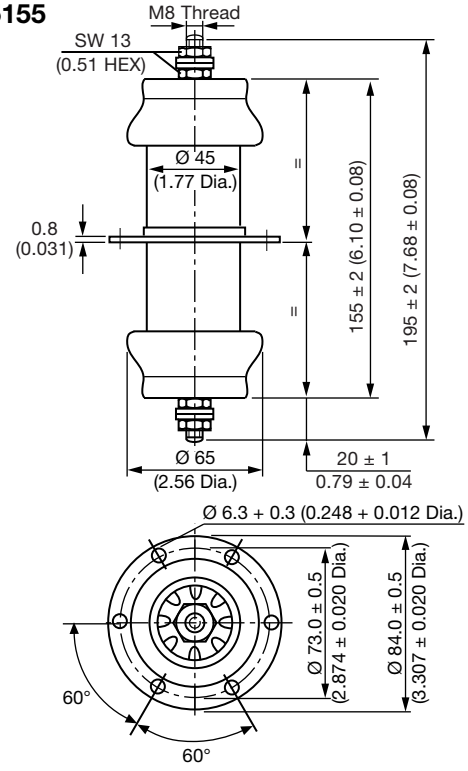
(2) DC or low frequency RMS current (< 20 kHz)

DIMENSIONS in millimeters (inches)

DB 045120



DB 045155



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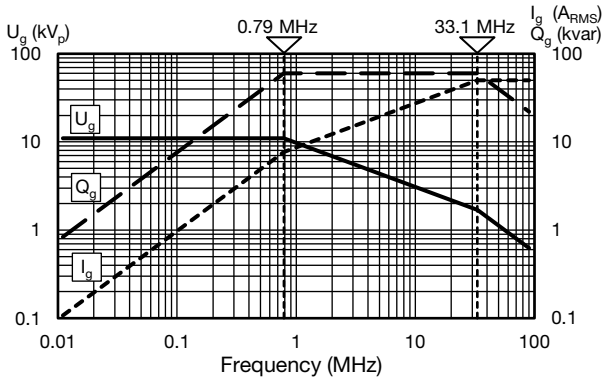
MOUNTING GUIDELINES

- 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

DB045120WE201##BG1



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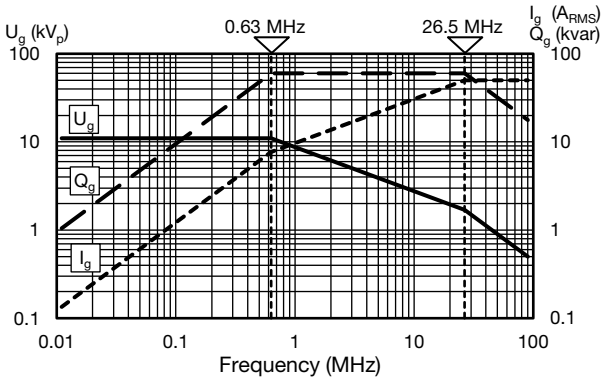

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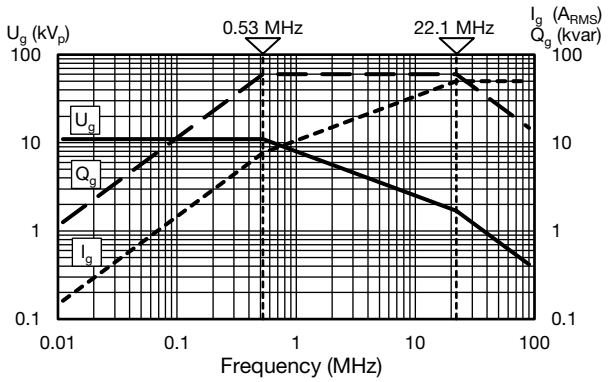

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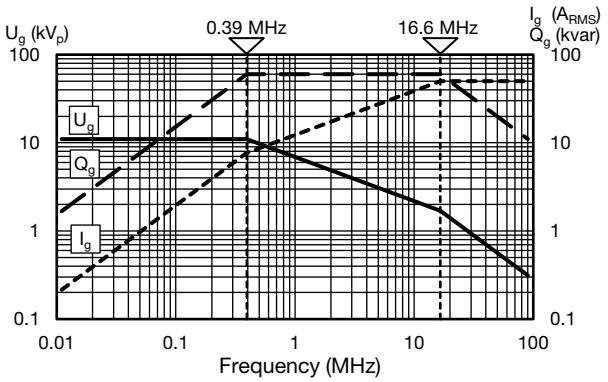

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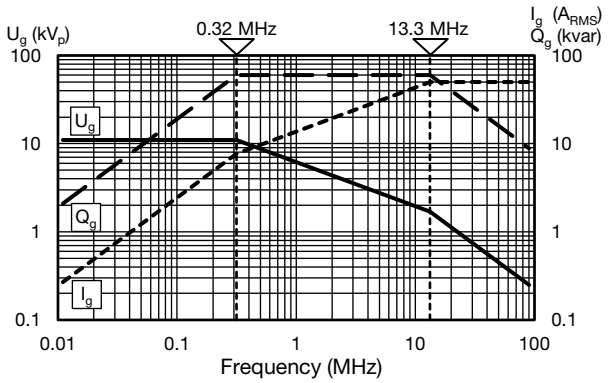

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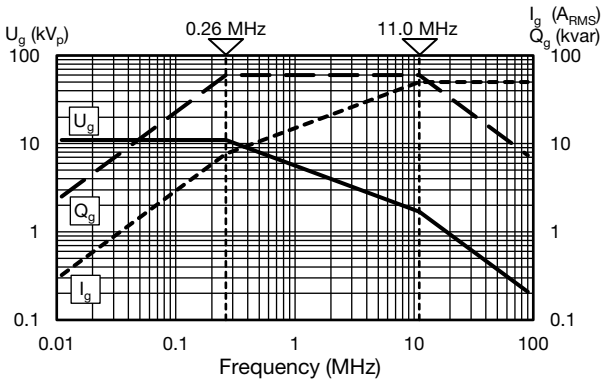

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DERATING DIAGRAMS

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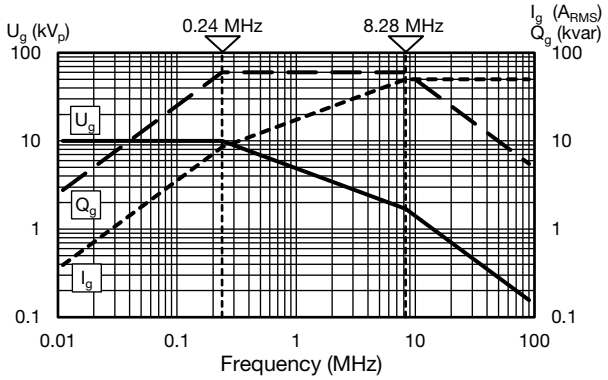

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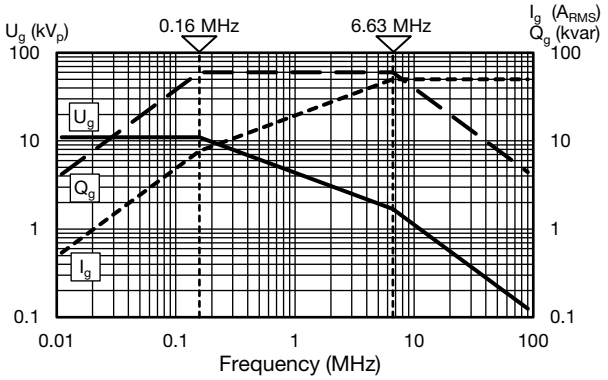

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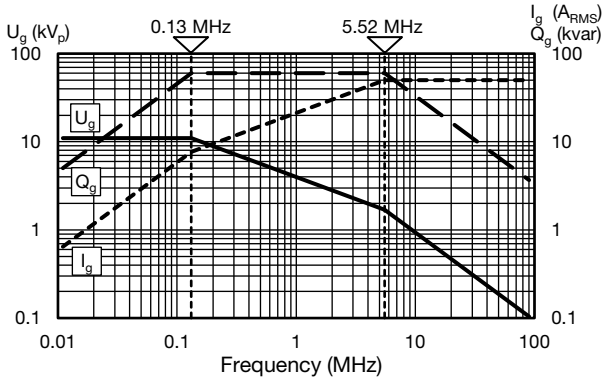

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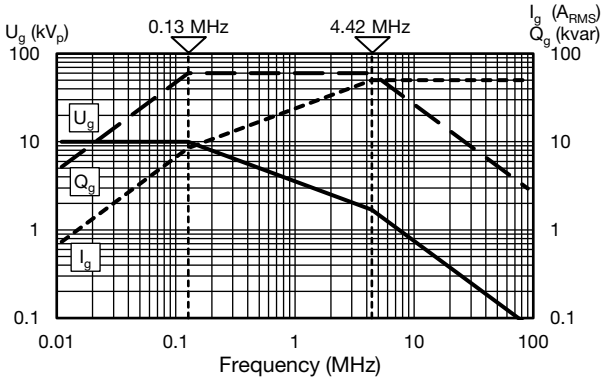

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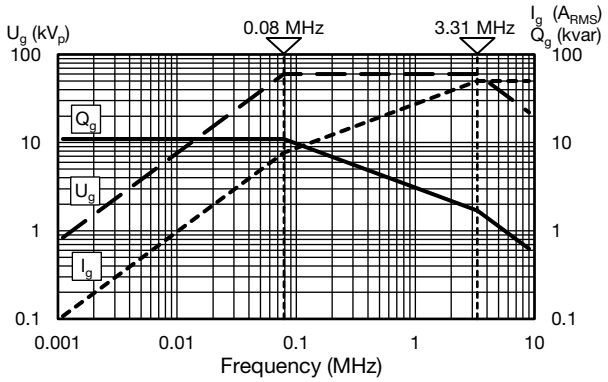

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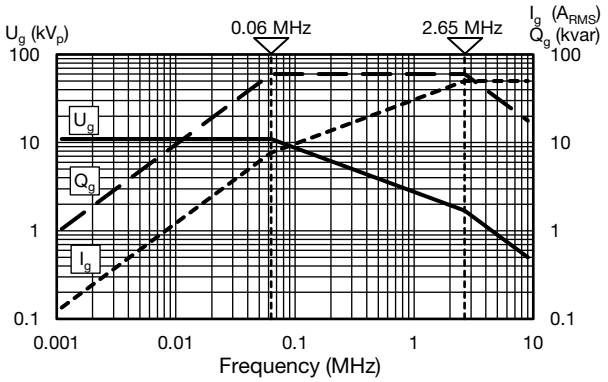

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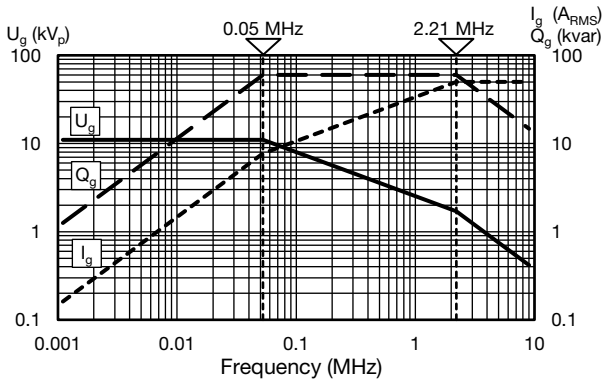

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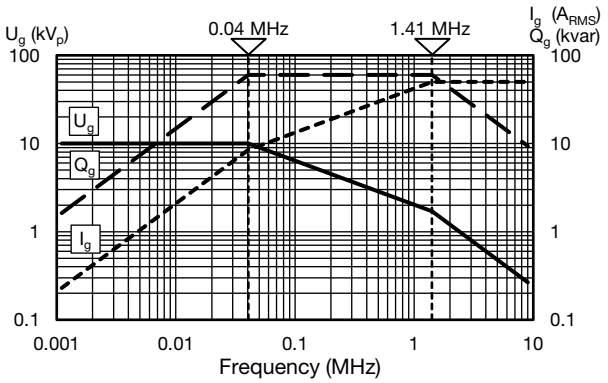

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DERATING DIAGRAMS

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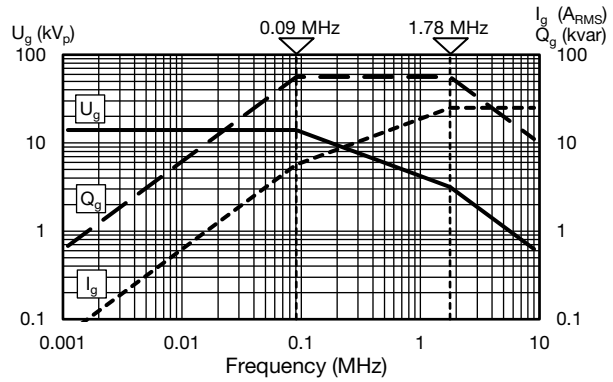

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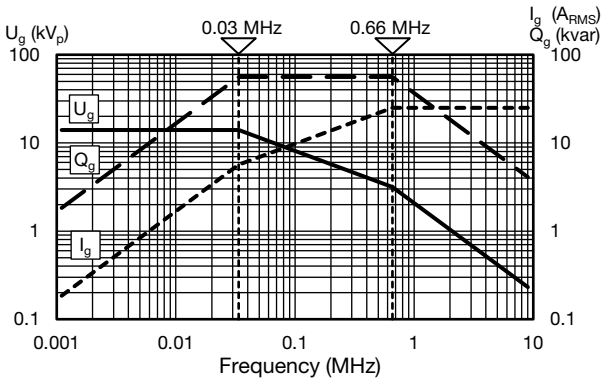

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