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DB 045120, DB 045155

Vishay Draloric

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	11.0						
DB045120BH152##BJ1		1500	10.0						
DB045120WE202##BK1	R230	2000	11.0				60.0	50.0	50.0
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 $\pm 20\% = 38$, $\pm 10\% = 36$, $\pm 5\% = 33$

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

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

DIMENSIONS in millimeters (inches)	
<p>DB 045120</p> <p>Side view dimensions: M10 Thread, SW 17 (0.67 HEX), Ø 45 (1.77 Dia.), 0.8 (0.031), 120 ± 2 (4.72 ± 0.08), 174 ± 2 (6.85 ± 0.08), Ø 65 (2.56 Dia.), 12 + 1 (0.47 + 0.04).</p> <p>Top view dimensions: Ø 6.3 ± 0.3 (0.248 ± 0.012 Dia.), Ø 73.0 ± 0.5 (2.874 ± 0.020 Dia.), Ø 84.0 ± 0.5 (3.307 ± 0.020 Dia.), 60°.</p>	<p>DB 045155</p> <p>Side view dimensions: M8 Thread, SW 13 (0.51 HEX), Ø 45 (1.77 Dia.), 0.8 (0.031), 155 ± 2 (6.10 ± 0.08), 195 ± 2 (7.68 ± 0.08), Ø 65 (2.56 Dia.), 20 ± 1 (0.79 ± 0.04).</p> <p>Top view dimensions: Ø 6.3 ± 0.3 (0.248 ± 0.012 Dia.), Ø 73.0 ± 0.5 (2.874 ± 0.020 Dia.), Ø 84.0 ± 0.5 (3.307 ± 0.020 Dia.), 60°.</p>



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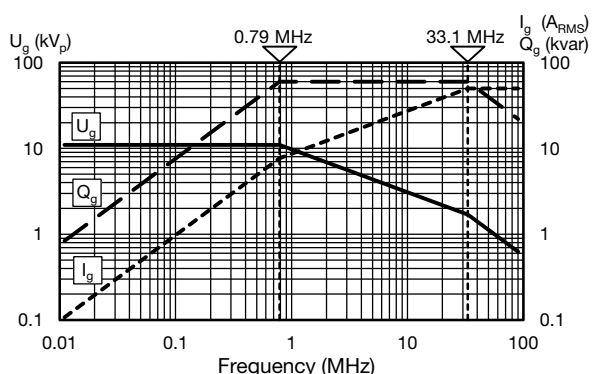
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MOUNTING GUIDELINES

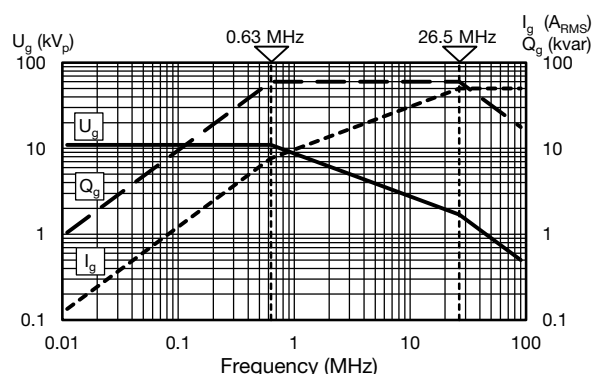
- The connection to one electrode must be flexible in order to prevent the generation of physical force which could damage the capacitor elements. Such forces are often generated by the dimensional differences resulting from the normal physical tolerances of these components.
- The capacitor elements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

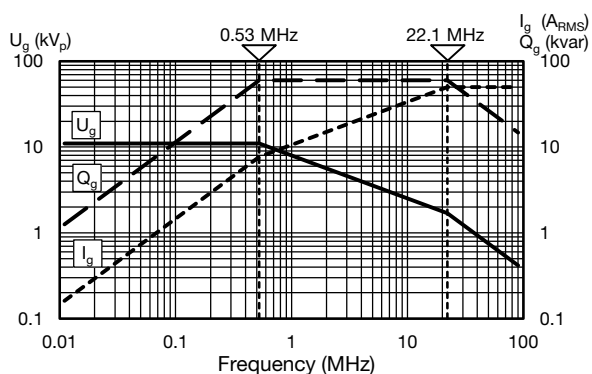
DB045120WE201##BG1



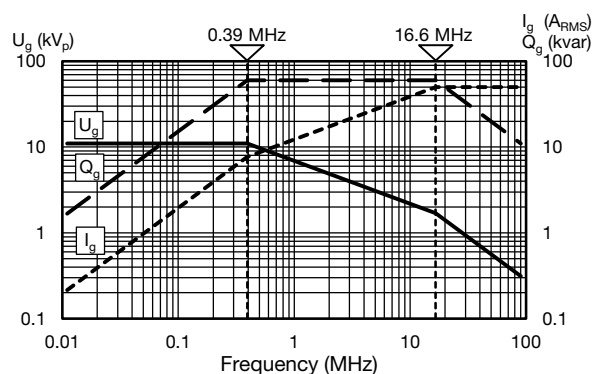
DB045120WE251##BG1



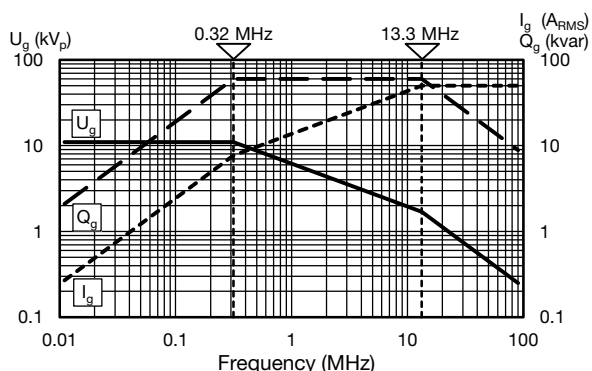
DB045120WE301##BG1



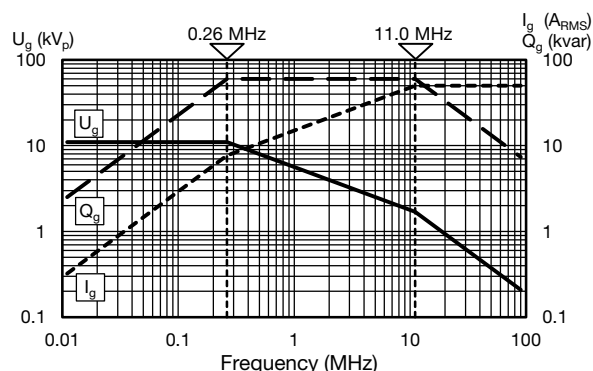
DB045120WE401##BH1



DB045120WE501##BH1



DB045120WE601##BH1





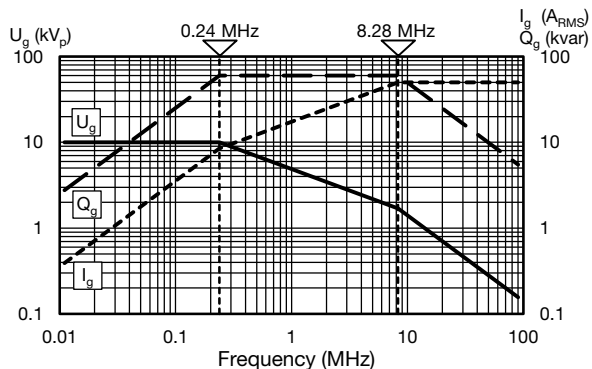
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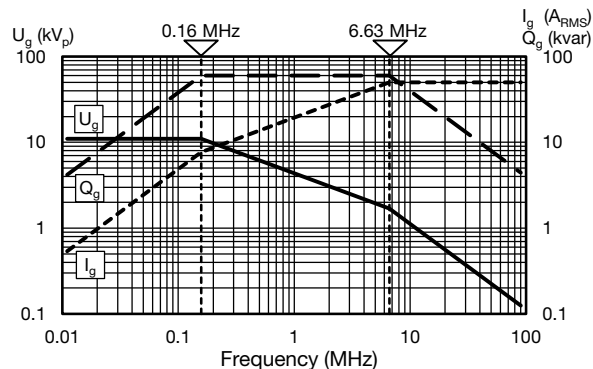
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DERATING DIAGRAMS

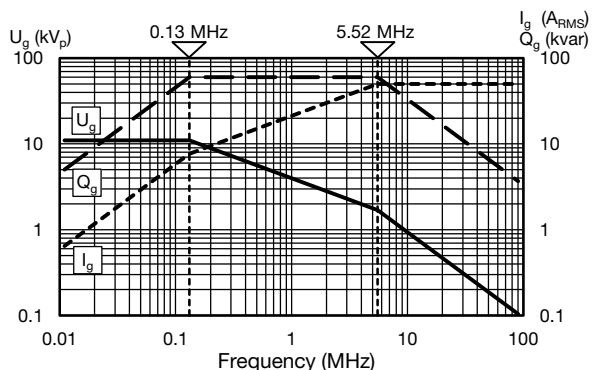
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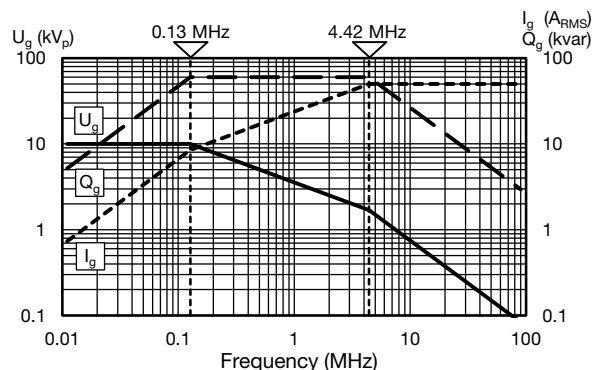
DB045120WE102##BJ1



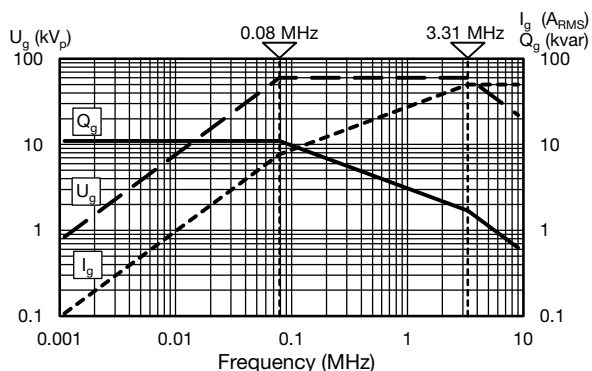
DB045120WE122##BJ1



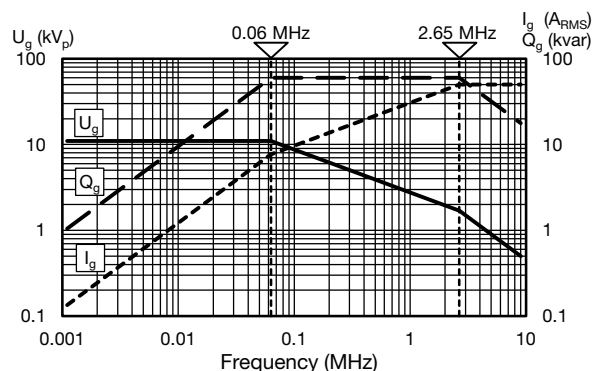
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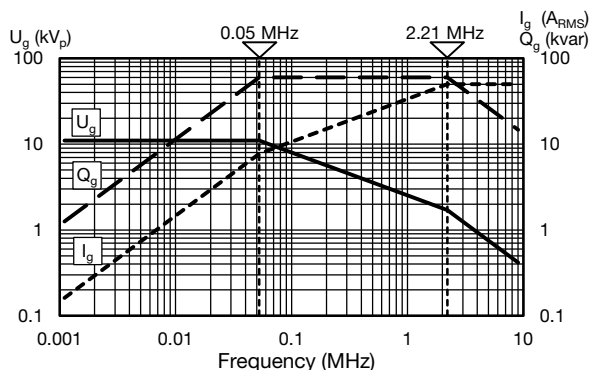
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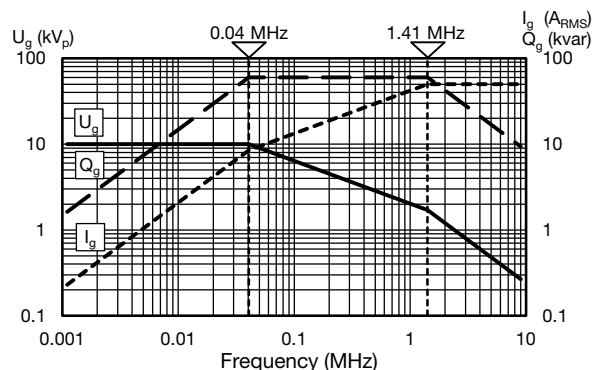
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DB045120WE302##BK1



DB045120BH472##BK1





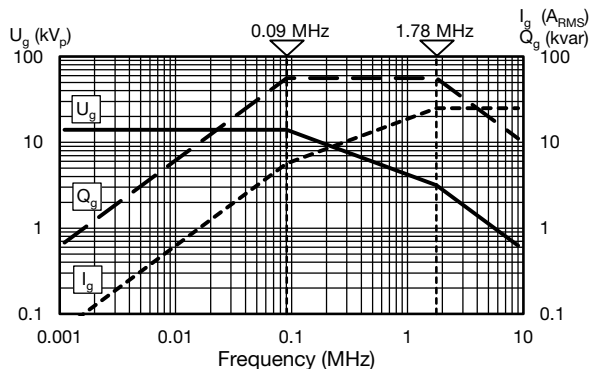
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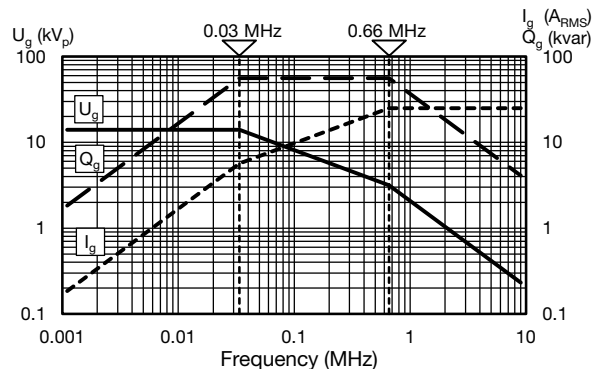
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DERATING DIAGRAMS

DB045155WJ102##BJ1



DB045155WJ272##BK1



RELATED DOCUMENTS

General Information

www.vishay.com/doc?222071



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