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Vishay Draloric

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



QUICK REFERENCE DATA						
DESCRIPTION	VALUE					
Ceramic Class		1				
Ceramic Dielectric	R85	R85, R230				
Туре	DB 050110	DB 050180				
Voltage (V <sub>p</sub> )	15 000	20 000				
Min. Capacitance (pF)	2000	1000				
Max. Capacitance (pF)	2000	3000				
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
- · High voltage ratings
- 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**

1.0 nF to 3.0 nF

#### **CAPACITANCE TOLERANCE**

± 20 %; ± 10 %

# **CERAMIC DIELECTRICS**

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

#### **RATED VOLTAGE**

- 15 kV<sub>p</sub>
- 20 kV<sub>p</sub>

## **DIELECTRIC STRENGTH TEST**

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

#### **DISSIPATION FACTOR**

Max. 0.05 % (100 kHz or 300 kHz)

## **INSULATION RESISTANCE**

Min. 10 000 MΩ (at 25 °C)

# **OPERATING TEMPERATURE RANGE**

-55 °C to +100 °C

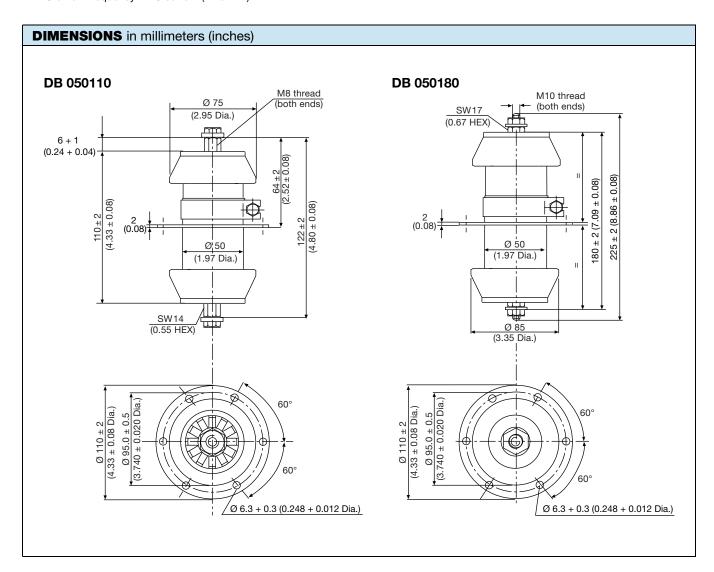


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SAP PART NUMBER AND ELECTRICAL DATA							
PART NUMBER	CERAMIC	CAP. VALUES (pF)	RATED VOLTAGE (kV <sub>P</sub> )	RATED POWER <sup>(1)</sup> (kvar)	RATED CURRENT (A <sub>RMS</sub> )	FEED-THROUGH CURRENT <sup>(2)</sup> (A)	
TYPE DB 050110							
DB050110BJ202##BK1	R230	2000	15.0	Max. 200.0	75.0	50.0	
TYPE DB 050180							
DB050180WP102##BJ1	- R85	1000		70.0	50.0		
DB050180WP152##BJ1		1500	20.0	70.0	30.0	70.0	
DB050180WP302##BK1	R230	3000		100.0	60.0		

#### **Notes**

- ##  $14^{th}$  to  $15^{th}$  digit: capacitance tolerance code  $\pm$  20 % = 38,  $\pm$  10 % = 36
- (1) The surface temperature during operation must not exceed +100 °C
- (2) DC or low frequency RMS current (< 20 kHz)



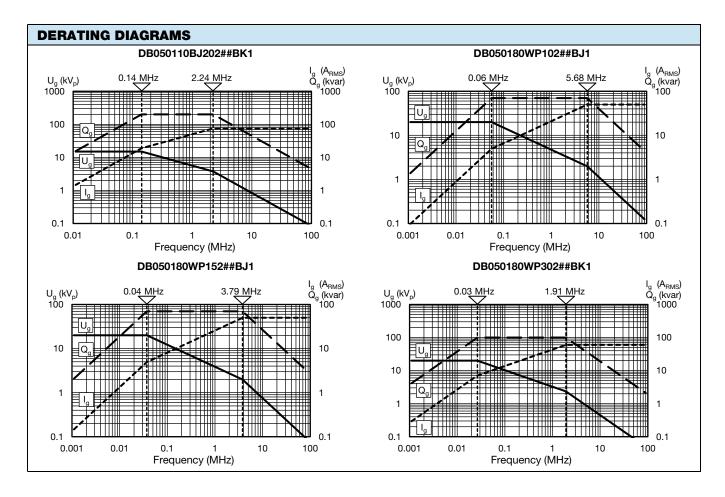


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# **MOUNTING GUIDELINES**

- 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.



RELATED DOCUMENTS	
General Information	www.vishay.com/doc?22071



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