

## RF Power Feed-Through Capacitors with Conductor Rod, Class 1, R16 HQ Ceramic Dielectric



QUICK REFERENCE DATA	
DESCRIPTION	VALUE
Ceramic Class	1
Ceramic Dielectric	R16 HQ
Type	DB 050166
Voltage ( $V_p$ )	25 000
Min. Capacitance (pF)	125
Max. Capacitance (pF)	125
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.

These capacitors features umbrella-shaped insulation rims made from silicone elastomer to minimize the adverse effects of moisture, dust and other impurities in the working environment and to improve the characteristics of the electrical field.

### MARKING

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

### FEATURES

- High voltage ratings
- High feed-through currents
- The insulation rim made of silicone rubber minimize the adverse effects of moisture, dust and other impurity in the working environment.

### APPLICATIONS

These capacitors feature a Q-factor greater than 10 000 which makes it well suited in operating frequency range from 0.1 MHz up to 30 MHz where high voltages and currents are present.

### CAPACITANCE RANGE

125 pF

### CAPACITANCE TOLERANCE

± 10 %

### CERAMIC DIELECTRICS

R16 High Q (TCC + 100 ppm/K)

### RATED VOLTAGE

25 kV<sub>p</sub>

### DIELECTRIC STRENGTH TEST

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

### RF POWER TEST

100 % of rated power, for 5 minutes in a test generator circuit

### DISSIPATION FACTOR

Max. 0.025 % (1 MHz)

### INSULATION RESISTANCE

Min. 100 000 MΩ (at 25 °C)

### OPERATING TEMPERATURE RANGE

-55 °C to +100 °C

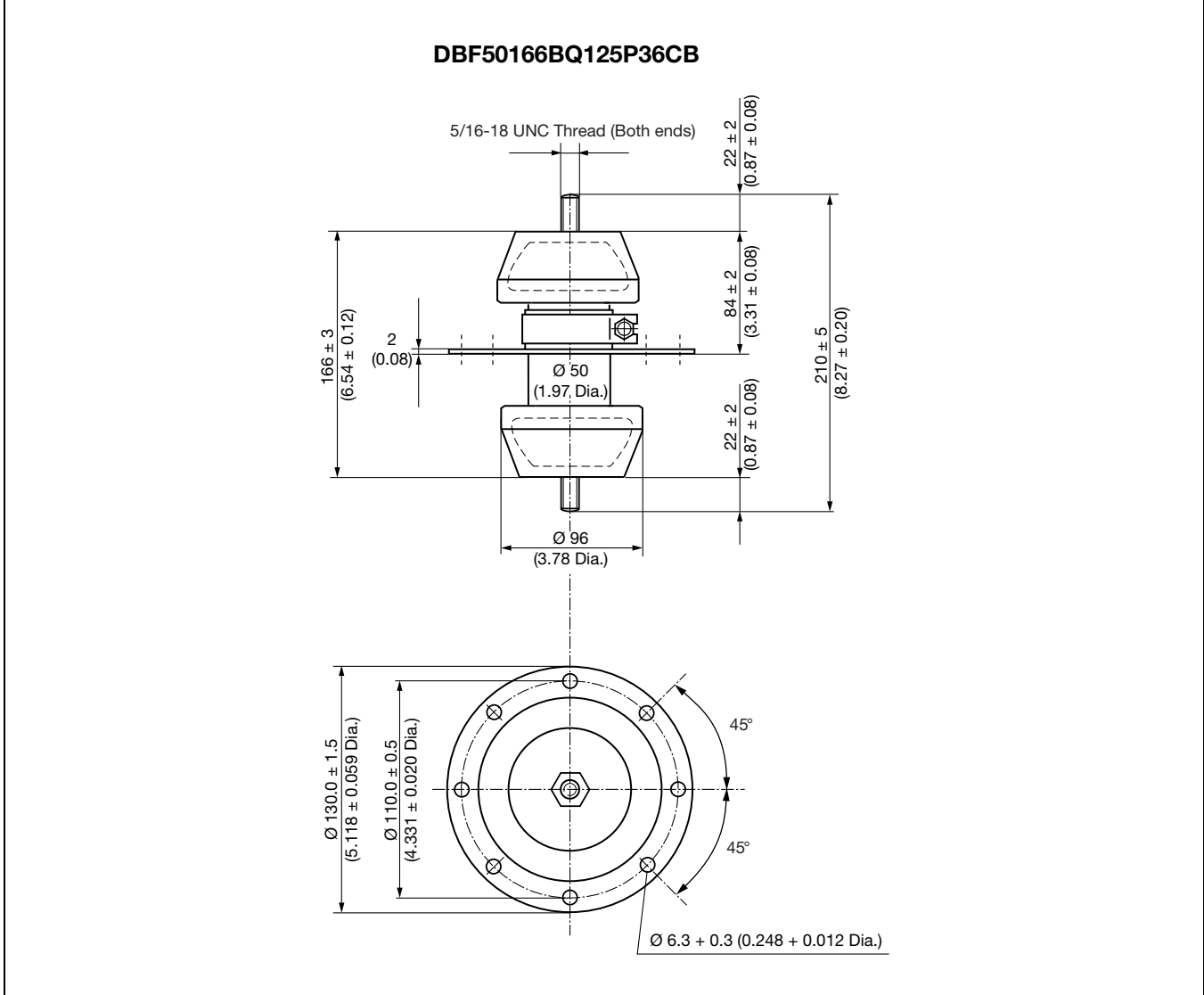


SAP PART NUMBER AND ELECTRICAL DATA						
PART NUMBER	CERAMIC	CAP. VALUES (pF)	RATED VOLTAGE (kV <sub>P</sub> )	RATED POWER <sup>(1)</sup> (kvar)	RATED CURRENT (A <sub>RMS</sub> )	FEED-THROUGH CURRENT <sup>(2)</sup> (A)
DBF50166BQ125P36CB	R16 HQ	125	25.0	Max. 550.0	120.0	80.0

Notes

- (1) The surface temperature during operation must not exceed +100 °C
- (2) DC or low frequency RMS current (< 20 kHz)

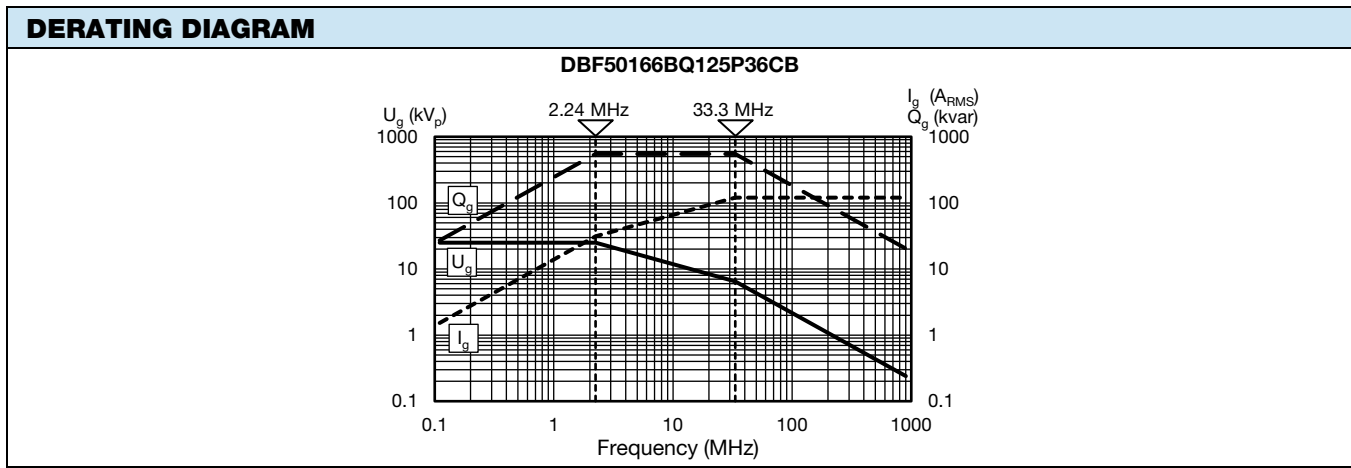
**DIMENSIONS** in millimeters (inches)





**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 5 Nm is recommended.



<b>RELATED DOCUMENTS</b>	
General Information	<a href="http://www.vishay.com/doc?22071">www.vishay.com/doc?22071</a>



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