

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



### QUICK REFERENCE DATA

| DESCRIPTION               | VALUE          |           |
|---------------------------|----------------|-----------|
| Ceramic Class             | 1              |           |
| Ceramic Dielectric        | R85            | R85, R230 |
| Type                      | DS 030070      | DS 030110 |
| Voltage (V <sub>p</sub> ) | 8000           | 12 000    |
| Min. Capacitance (pF)     | 500            | 800       |
| Max. Capacitance (pF)     | 800            | 1800      |
| 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

### FEATURES

- Small size
- Geometry minimizes inductance
- 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

500 pF to 1.8 nF

### CAPACITANCE TOLERANCE

± 20 %; ± 10 %; ± 5 %

### CERAMIC DIELECTRICS

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

### RATED VOLTAGE

- 8.0 kV<sub>p</sub>
- 12.0 kV<sub>p</sub>

### 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. 100 000 MΩ (at 25 °C)

### OPERATING TEMPERATURE RANGE

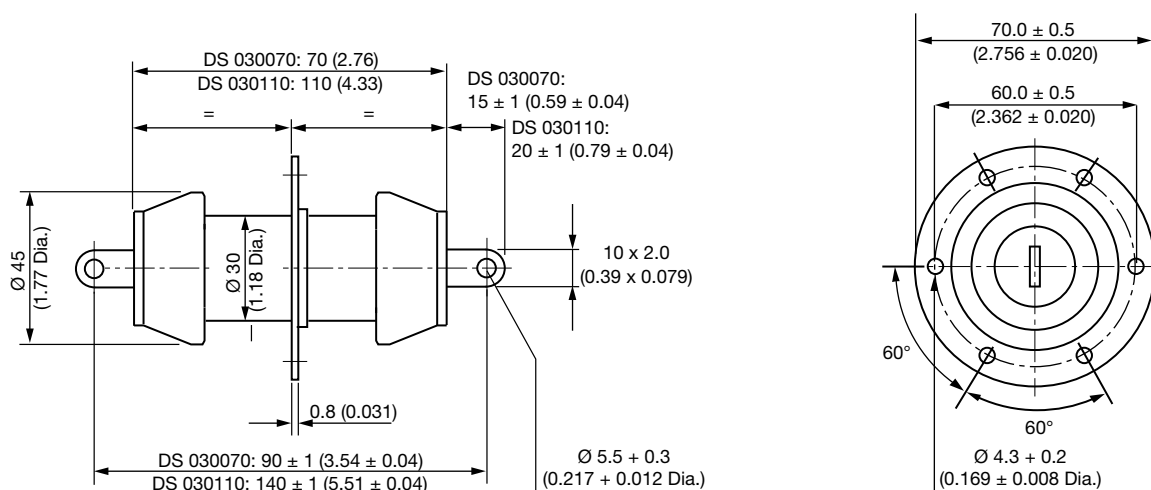
-55 °C to +100 °C

**SAP PART NUMBER AND ELECTRICAL DATA**

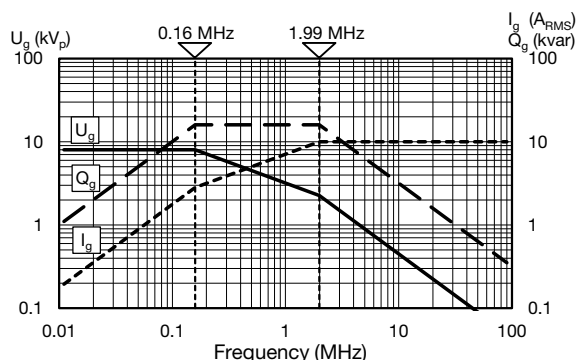
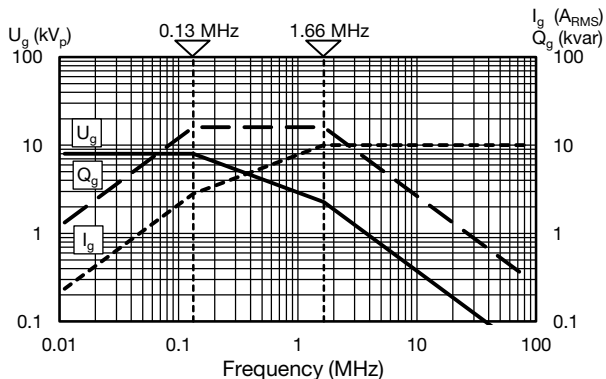
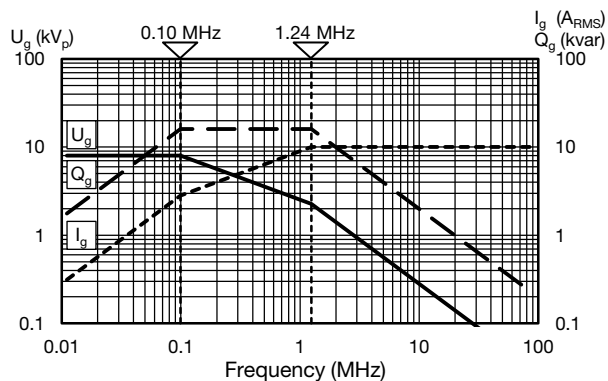
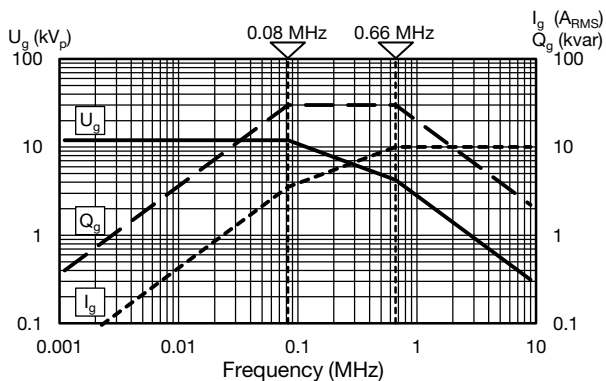
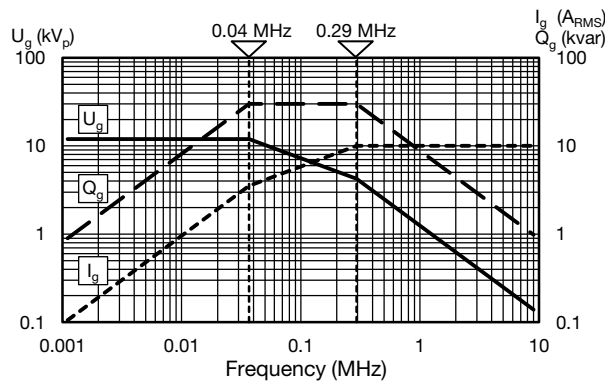
| PART NUMBER        | CERAMIC | CAP. VALUES (pF) | RATED VOLTAGE (kV <sub>P</sub> ) | RATED POWER <sup>(1)</sup> (kvar) | RATED CURRENT (A <sub>RMS</sub> ) | FEED-THROUGH CURRENT <sup>(2)</sup> (A) |
|--------------------|---------|------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------------|
| TYPE DS 030070     |         |                  |                                  |                                   |                                   |                                         |
| DS030070BP501##BJ1 | R85     | 500              | 8                                | 16                                | 10                                | 20                                      |
| DS030070BP601##BJ1 |         | 600              |                                  |                                   |                                   |                                         |
| DS030070BP801##BJ1 |         | 800              |                                  |                                   |                                   |                                         |
| TYPE DS 030110     |         |                  |                                  |                                   |                                   |                                         |
| DS030110WF801##BJ2 | R85     | 800              | 12                               | 30                                | 10                                | 20                                      |
| DS030110WF182##BK1 | R230    | 1800             |                                  |                                   |                                   |                                         |

**Notes**

- ## 14<sup>th</sup> to 15<sup>th</sup> digit: capacitance tolerance code  $\pm 20\%$  = 38,  $\pm 10\%$  = 36,  $\pm 5\%$  = 33
- <sup>(1)</sup> The surface temperature during operation must not exceed +100 °C
- <sup>(2)</sup> 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.

**DERATING DIAGRAMS**
**DS030070BP501##BJ1**

**DS030070BP601##BJ1**

**DS030070BP801##BJ1**

**DS030110WF801##BJ2**

**DS030110WF182##BK1**

**RELATED DOCUMENTS**

General Information

[www.vishay.com/doc?22071](http://www.vishay.com/doc?22071)



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