

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



| QUICK REFERENCE DATA | | | | |
|---------------------------|----------------|-----------|-----------|------|
| DESCRIPTION | VALUE | | | |
| Ceramic Class | 1 | | | |
| Ceramic Dielectric | R85 | R85 | R85, R230 | |
| Type | DB 016030 | DB 016040 | DB 016060 | |
| Voltage (V _p) | 3000 | 3000 | 3000 | 4000 |
| Min. Capacitance (pF) | 200 | 500 | 1000 | 800 |
| Max. Capacitance (pF) | 600 | 800 | 2500 | 800 |
| 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.

MARKING

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

FEATURES

- Small size
- Geometry minimizes inductance
- Wide range of capacitance values

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 2.5 nF

CAPACITANCE TOLERANCE

± 20 %; ± 10 %; ± 5 %

CERAMIC DIELECTRICS

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

RATED VOLTAGE

- 3.0 kV_p
- 4.0 kV_p

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. 10 000 MΩ (at 25 °C)

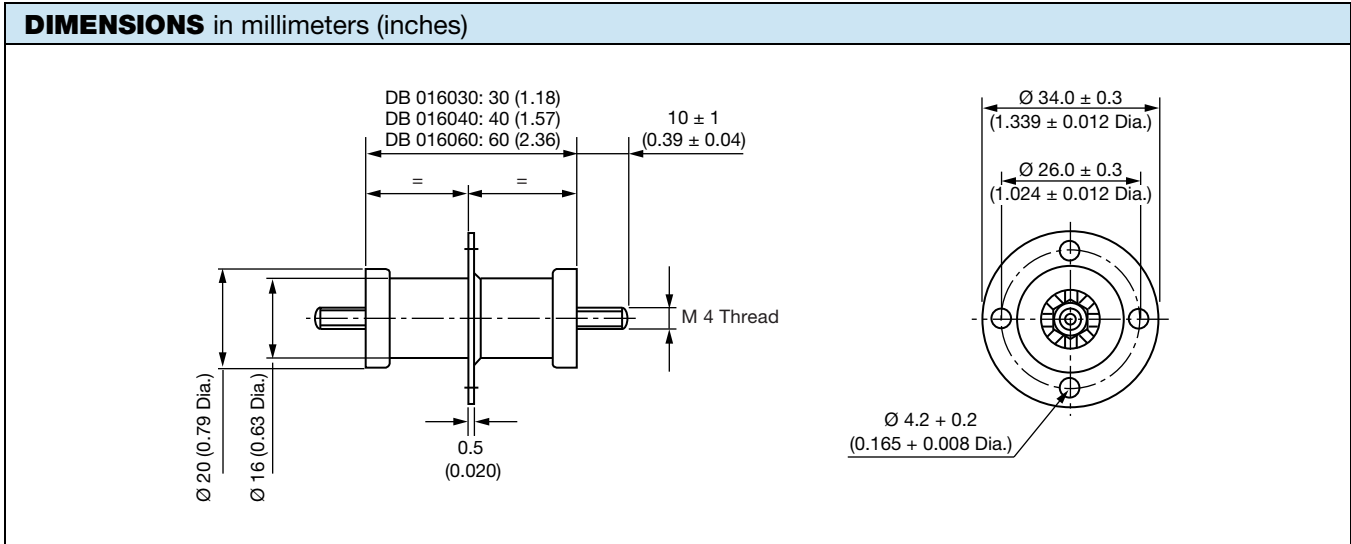
OPERATING TEMPERATURE RANGE

-55 °C to +100 °C

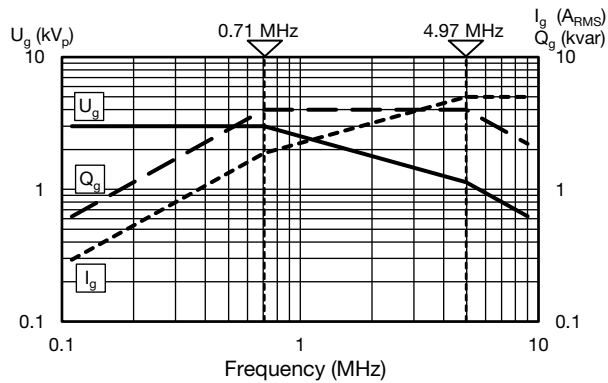
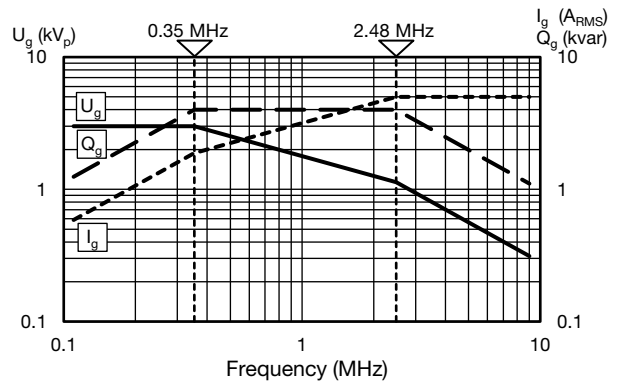
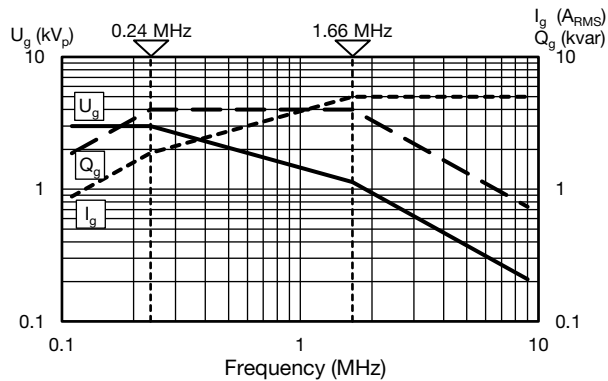
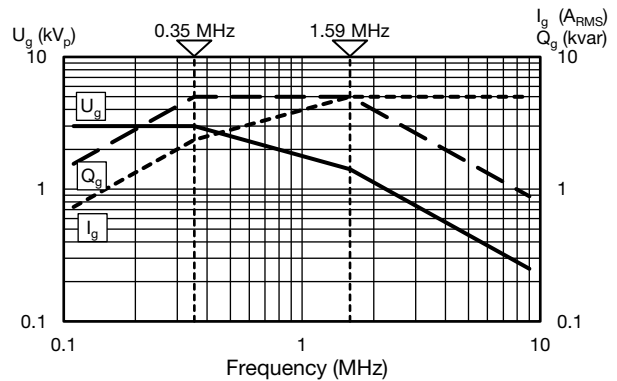
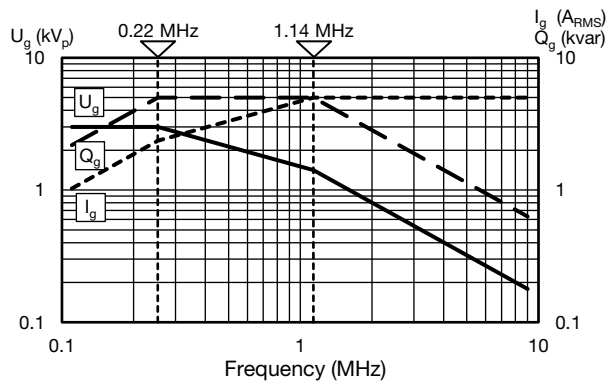
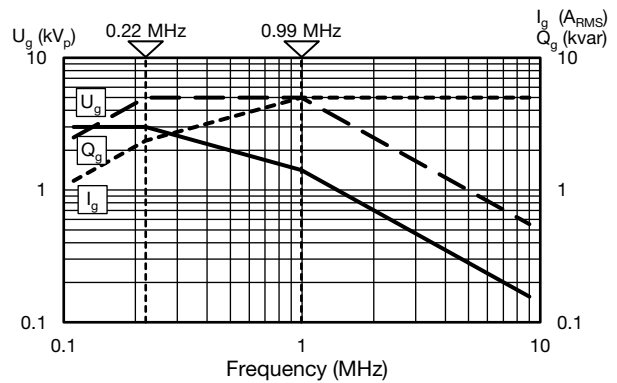
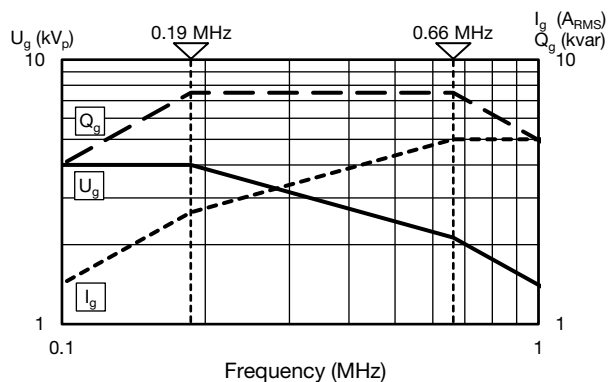
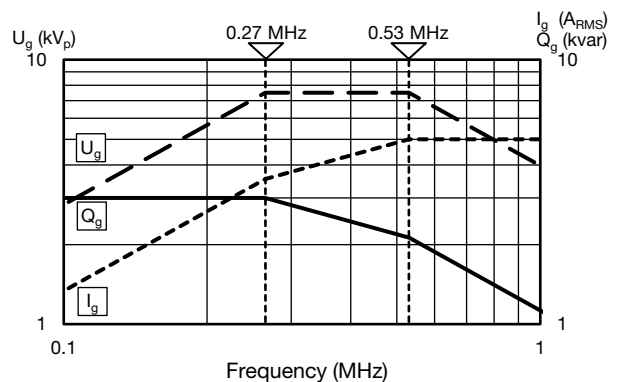
| SAP PART NUMBER AND ELECTRICAL DATA | | | | | | |
|-------------------------------------|---------|------------------|----------------------------------|-----------------------------------|-----------------------------------|---|
| PART NUMBER | CERAMIC | CAP. VALUES (pF) | RATED VOLTAGE (kV _P) | RATED POWER ⁽¹⁾ (kvar) | RATED CURRENT (A _{RMS}) | FEED-THROUGH CURRENT ⁽²⁾ (A) |
| TYPE DB 016030 | | | | | | |
| DB016030BC201##BJ1 | R85 | 200 | 3.0 | 4.0 | 5.0 | 10.0 |
| DB016030BC401##BJ1 | | 400 | | | | |
| DB016030BC601##BJ1 | | 600 | | | | |
| TYPE DB 016040 | | | | | | |
| DB016040BC501##BJ1 | R85 | 500 | 3.0 | 5.0 | 5.0 | 10.0 |
| DB016040BC701##BJ1 | | 700 | | | | |
| DB016040BC801##BJ1 | | 800 | | | | |
| TYPE DB 016060 | | | | | | |
| DB016060BD801##BJ1 | R85 | 800 | 4.0 | 7.5 | 5.0 | 10.0 |
| DB016060BC102##BJ1 | | 1000 | 3.0 | | | |
| DB016060BC122##BJ1 | | 1200 | | | | |
| DB016060BC152##BJ1 | | 1500 | | | | |
| DB016060BC252##BK1 | R230 | 2500 | | | | |

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)


MOUNTING GUIDELINES

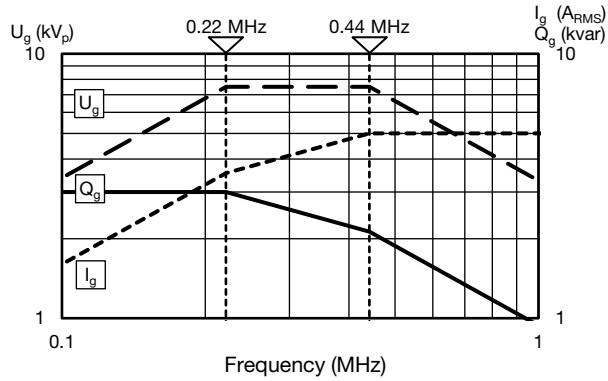
- The connection to one electrode must be flexible in order to prevent the generation of physical force which could damage the capacitor elements. Such forces are often generated by the dimensional differences resulting from the normal physical tolerances of these components.
- The capacitor elements 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 3.5 Nm (31 lbf in) is recommended.

DERATING DIAGRAMS
DB016030BC201##BJ1

DB016030BC401##BJ1

DB016030BC601##BJ1

DB016040BC501##BJ1

DB016040BC701##BJ1

DB016040BC801##BJ1

DB016060BD801##BJ1

DB016060BC102##BJ1


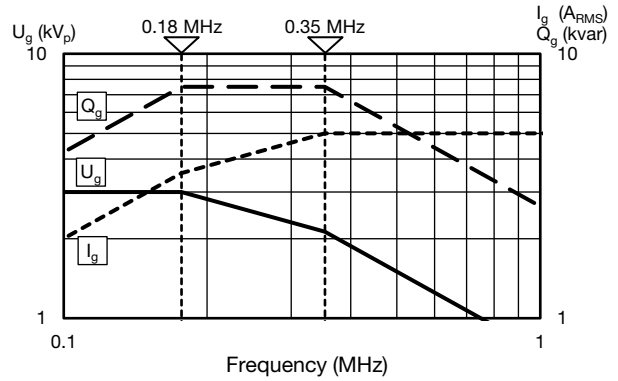


DERATING DIAGRAMS

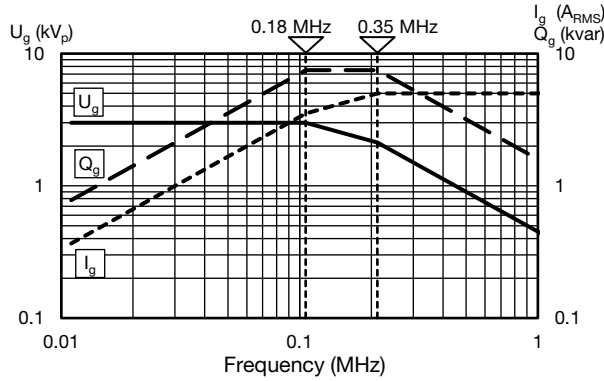
DB016060BC122##BJ1



DB016060BC152##BJ1



DB016060BC252##BK1



RELATED DOCUMENTS

General Information

www.vishay.com/doc?22071



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