

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



QUICK REFERENCE DATA

DESCRIPTION	VALUE			
Ceramic Class	1			
Ceramic Dielectric	R42, R85			
Type	DWB 045120		DWB 045150	
Voltage (V _p)	8000	10 000	13 000	16 000
Min. Capacitance (pF)	800	600	400	500
Max. Capacitance (pF)	2500	1500	1200	1200
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

400 pF to 2.5 nF

CAPACITANCE TOLERANCE

± 20 %; ± 10 %; ± 5 %

CERAMIC DIELECTRICS

- R42 (TCC - 250 ppm/K)
- R85 (TCC - 750 ppm/K)

RATED VOLTAGE

- 8 kV_p
- 10 kV_p
- 13 kV_p
- 16 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

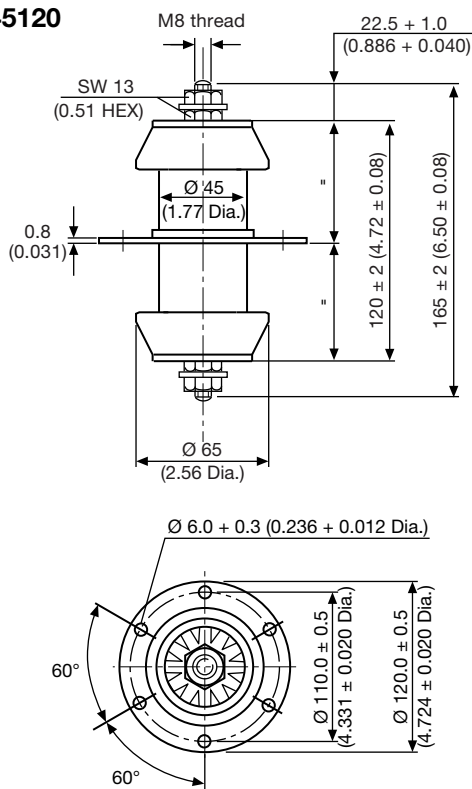
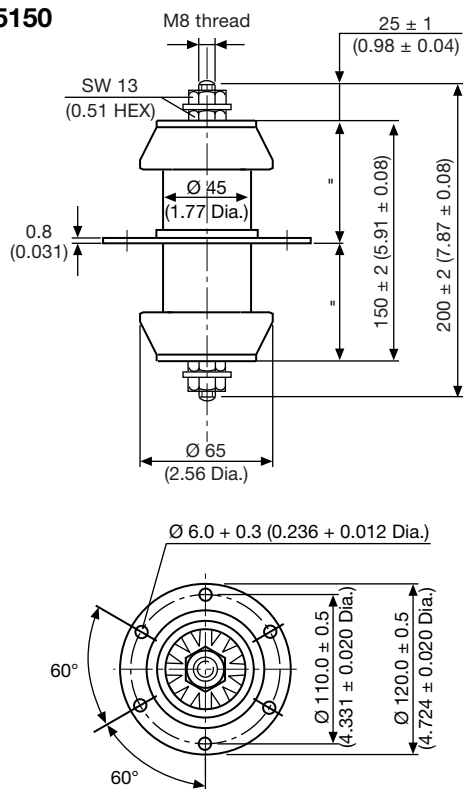
-55 °C to +100 °C

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 DWB 045120						
DWB45120WH401##BH1	R42	400	13.0	56.0	25.0	50.0
DWB45120WH501##BH1		500				
DWB45120BH601##BH1		600				
DWB45120BP801##BH1		800				
DWB45120WH102##BJ1	R85	1000	13.0			
DWB45120WH122##BJ1		1200				
DWB45120BH152##BJ1		1500	10.0			
DWB45120BP202##BJ1		2000	8.0			
DWB45120BP252##BJ1		2500				
TYPE DWB 045150						
DWB45150WL501##BH1	R42	500	16.0	30.0	10.0	50.0
DWB45150WL122##BJ1	R85	1200				

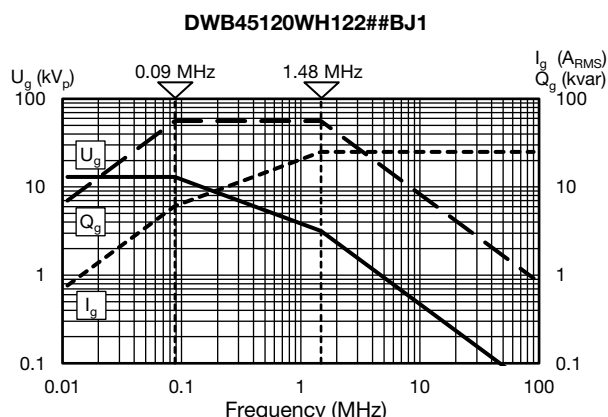
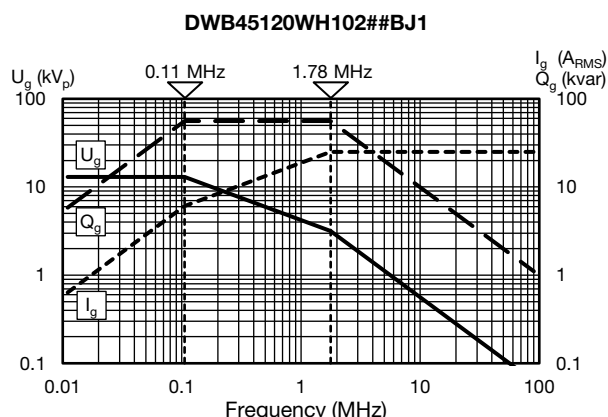
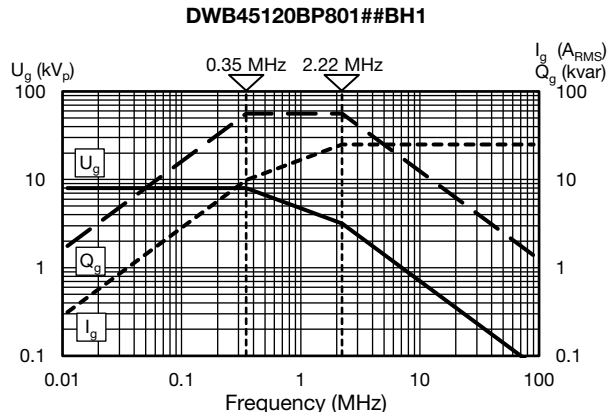
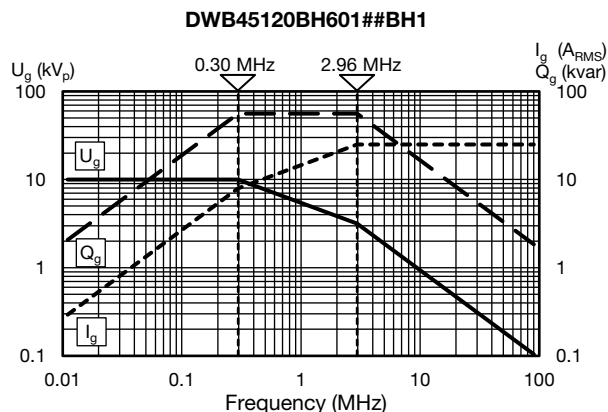
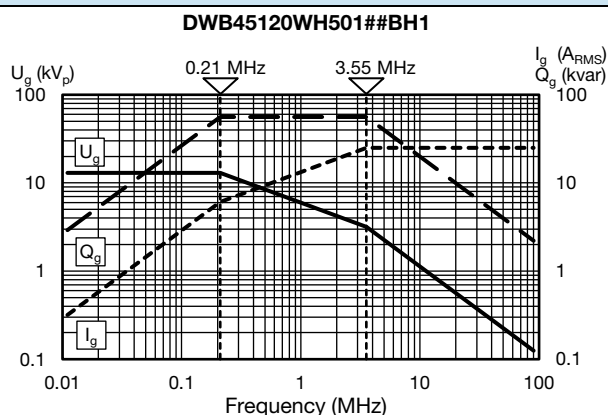
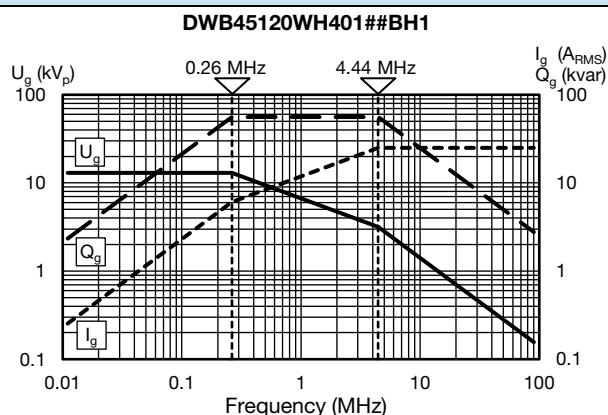
Notes

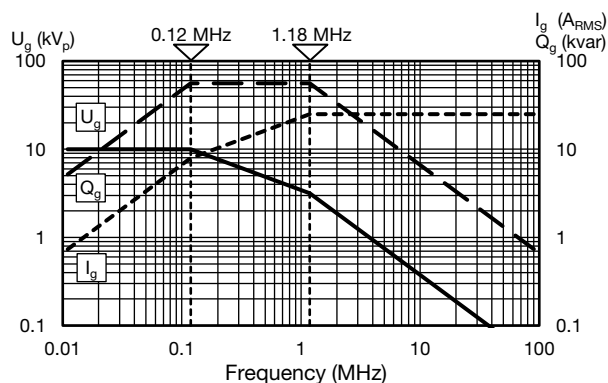
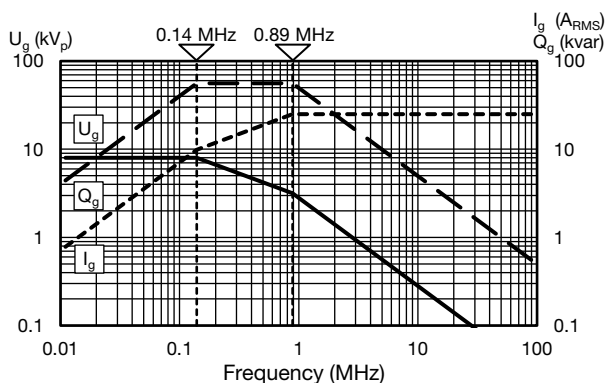
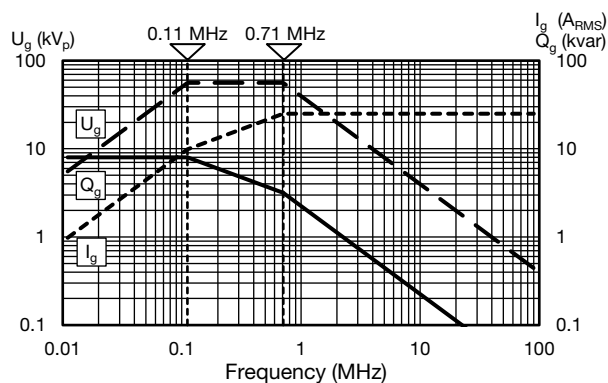
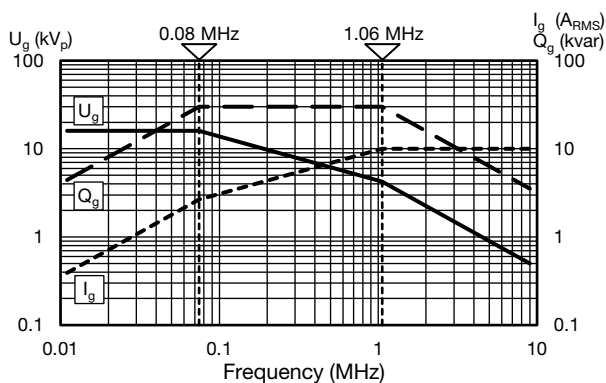
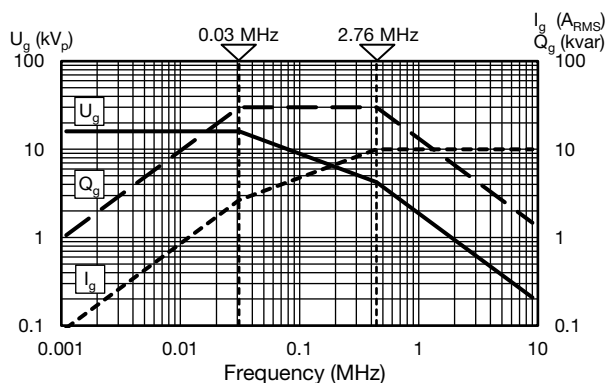
- ## 14th to 15th digit: capacitance tolerance code $\pm 20\% = 38$, $\pm 10\% = 36$, $\pm 5\% = 33$
- (1) The surface temperature during operation must not exceed +100 °C
- (2) DC or low frequency RMS current (< 20 kHz)

DIMENSIONS in millimeters (inches)
DWB 045120

DWB 045150


**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

DERATING DIAGRAMS
DWB45120BH152##BJ1

DWB45120BP202##BJ1

DWB45120BP252##BJ1

DWB45150WL501##BH1

DWB45150WL122##BJ1

RELATED DOCUMENTS

General Information

www.vishay.com/doc?22071



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.