RF Power Barrel Capacitors, Class 1 Ceramic

QUICK REFERENCE DATA		
DESCRIPTION	VALUE	
Ceramic Class	1	1
Ceramic Dielectric	NP0 (C0G)	N750 (U2J)
Type	5FCA, 5FDA, 5FEA, 5FFA, 5FGA, 5FHA	5FCU, 5FDU, 5FEP, 5FFU, 5FGU, 5FHU
Voltage (V_{DC})	5000	5000
Min. Capacitance (pF)	3.0	10
Max. Capacitance (pF)	20	40
Mounting	Axial or screw terminal	

MATERIAL

Capacitor elements made from class 1 ceramic dielectric with noble metal electrodes.

Connection terminals:

- Axial wire leads, tinned copper (style FC., FD., FE.)
- Thread terminal, brass, tin plated (style FF., FG., FH.)

Allowable torque: 0.34 Nm (3.0 lbf in)

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

- Very small size make it well suited in mobile equipment
- Geometry minimizes inductance, optimizes voltage withstand and maximizes heat radiation
- Available with thread terminals or solderable wire leads

APPLICATIONS

- Radio communication equipment
- Small broadcasting equipment
- RF power supply

CAPACITANCE RANGE

3.0 pF to 40 pF

CAPACITANCE TOLERANCE

< 5 pF: ± 0.25 pF; ± 0.5 pF

≥ 5 pF: ± 10 %; ± 5 %

CERAMIC DIELECTRICS

- NP0 (C0G)
- N750 (U2J)

RATED VOLTAGE

5.0 kV_{DC}

DIELECTRIC STRENGTH TEST

150 % of rated DC voltage

DISSIPATION FACTOR

Max. 0.2 % (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_{DC})	RATED POWER (1) (kvar)	RATED CURRENT (A_{RMS})
TYPE 5FCA, 5DA, 5FEA					
5FCA3R0#	NP0 (C0G)	3.0	5.0	2.3	1.5
5FCA5R0#		5.0		3.8	1.6
5FDA100#		10		4.2	2.3
5FEA200#		20		7.6	3.4
TYPE 5FCU, 5DU, 5FEU					
5FCU100#	N750 (U2J)	10	5.0	2.3	1.5
5FDU200#		20		3.8	1.6
5FEU300#		30		4.0	2.0
5FEU400#		40		4.2	2.3
TYPE 5FFA, 5FGA, 5FHA					
5FFA3R0#	NP0 (C0G)	3.0	5.0	2.3	1.5
5FFA5R0#		5.0		3.8	1.6
5FGA100#		10		4.2	2.3
5FHA200#		20		7.6	3.4
TYPE 5FFU, 5GU, 5FHU					
5FFU100#	N750 (U2J)	10	5.0	2.3	1.5
5FGU200#		20		3.8	1.6
5FHU400#		40		4.2	2.3

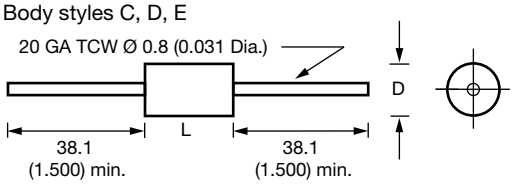
Notes

- # 8th digit of the part number: capacitance tolerance code ± 0.25 pF = C, ± 0.5 pF = D, ± 5 % = J, ± 10 % = K

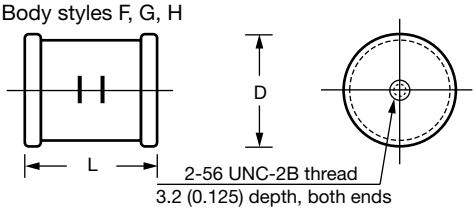
(1) At rated voltage. Data presented is based on a minimum body temperature rise of 30 °C at +25 °C

DIMENSIONS in millimeters (inches)

Body styles C, D, E



Body styles F, G, H



PART NUMBER	BODY STYLE	DIAMETER D ± 0.8 (± 0.031) mm (inches)	LENGTH L ± 0.8 (± 0.031) mm (inches)
TYPE 5FCA, 5DA, 5FEA			
5FCA3R0#	C	6.4 (0.250)	8.7 (0.343)
5FCA5R0#			
5FDA100#	D	9.5 (0.375)	9.5 (0.375)
5FEA200#	E	12.7 (0.500)	11.1 (0.437)
TYPE 5FCU, 5DU, 5FEU			
5FCU100#	C	6.4 (0.250)	8.7 (0.343)
5FDU200#	D	9.5 (0.375)	9.5 (0.375)
5FEU300#	E	12.7 (0.500)	11.1 (0.437)
5FEU400#			
TYPE 5FFA, 5FGA, 5FHA			
5FFA3R0#	F	7.9 (0.312)	9.9 (0.390)
5FFA5R0#			
5FGA100#	G	11.1 (0.437)	10.7 (0.422)
5FHA200#	H	14.3 (0.562)	12.3 (0.484)
TYPE 5FFU, 5GU, 5FHU			
5FFU100#	F	7.9 (0.312)	9.9 (0.390)
5FGU200#	G	11.1 (0.437)	10.7 (0.422)
5FHU400#	H	14.3 (0.562)	12.3 (0.484)

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.

Hyperlinks included in this datasheet may direct users to third-party websites. These links are provided as a convenience and for informational purposes only. Inclusion of these hyperlinks does not constitute an endorsement or an approval by Vishay of any of the products, services or opinions of the corporation, organization or individual associated with the third-party website. Vishay disclaims any and all liability and bears no responsibility for the accuracy, legality or content of the third-party website or for that of subsequent links.

Vishay products are not designed for use in life-saving or life-sustaining applications or any application in which the failure of the Vishay product could result in personal injury or death unless specifically qualified in writing by Vishay. 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.