

## 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:  $\pm 0.25$  pF;  $\pm 0.5$  pF

$\geq 5$  pF:  $\pm 10$  %;  $\pm 5$  %

### CERAMIC DIELECTRICS

- NP0 (C0G)
- N750 (U2J)

### RATED VOLTAGE

5.0 kV<sub>DC</sub>

### DIELECTRIC STRENGTH TEST

150 % of rated DC voltage

### DISSIPATION FACTOR

Max. 0.2 % (1 MHz)

### INSULATION RESISTANCE

Min. 100 000 M $\Omega$  (at 25 °C)

### OPERATING TEMPERATURE RANGE

-55 °C to +100 °C

<b>SAP PART NUMBER AND ELECTRICAL DATA</b>					
PART NUMBER	CERAMIC	CAP. VALUES (pF)	RATED VOLTAGE (kV <sub>DC</sub> )	RATED POWER <sup>(1)</sup> (kvar)	RATED CURRENT (A <sub>RMS</sub> )
<b>TYPE 5FCA, 5DA, 5FEA</b>					
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
<b>TYPE 5FCU, 5DU, 5FEU</b>					
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
<b>TYPE 5FFA, 5FGA, 5FHA</b>					
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
<b>TYPE 5FFU, 5GU, 5FHU</b>					
5FFU100#	N750 (U2J)	10	5.0	2.3	1.5
5FGU200#		20		3.8	1.6
5FHU400#		40		4.2	2.3

**Notes**

- # 8<sup>th</sup> digit of the part number: capacitance tolerance code  $\pm 0.25$  pF = C,  $\pm 0.5$  pF = D,  $\pm 5\%$  = J,  $\pm 10\%$  = K
- (1) At rated voltage. Data presented is based on a minimum body temperature rise of 30 °C at +25 °C

<b>DIMENSIONS</b> in millimeters (inches)				
PART NUMBER	BODY STYLE	DIAMETER D $\pm 0.8$ ( $\pm 0.031$ ) mm (inches)	LENGTH L $\pm 0.8$ ( $\pm 0.031$ ) mm (inches)	
<b>TYPE 5FCA, 5DA, 5FEA</b>				
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)	
<b>TYPE 5FCU, 5DU, 5FEU</b>				
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#				
<b>TYPE 5FFA, 5FGA, 5FHA</b>				
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)	
<b>TYPE 5FFU, 5GU, 5FHU</b>				
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)	

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



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