

## RF Power Barrel Capacitors with Mounting Tags or Screw Terminals, Class 1 Ceramic



QUICK REFERENCE DATA		
DESCRIPTION	VALUE	
Ceramic Class	1	
Ceramic Dielectric	R7, R16, R42, R85	
Type	TOF 016010 TOS 016010	TOF 025016 TOS 025016
Voltage (V <sub>p</sub> )	5000	9000
Min. Capacitance (pF)	1.5	2.0
Max. Capacitance (pF)	50	100
Mounting	Mounting tags or screw terminal	

### MATERIAL

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

Connection terminals:

- Axial copper tags, silver plated (style TOF...)
- Thread terminal, brass, silver plated (style TOS...)

Allowable torque: M5 thread 3.5 Nm (31 lbf in)  
M6 thread 5.0 Nm (44 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

- Small size
- Geometry minimizes inductance, optimizes voltage withstand and maximizes heat radiation
- Available with thread terminals or copper mounting tags

### APPLICATIONS

- Industrial and medical RF power supply
- Small broadcasting equipment
- Antenna couplers
- Induction heating equipment

### CAPACITANCE RANGE

1.5 pF to 100 pF

### CAPACITANCE TOLERANCE

< 10 pF: ± 2 pF; ± 1 pF; ± 0.5 pF  
≥ 10 pF: ± 20 %; ± 10 %; ± 5 %

### CERAMIC DIELECTRICS

- R7 (TCC + 100 ppm/K)
- R16 (TCC + 100 ppm/K)
- R42 (TCC - 250 ppm/K)
- R85 (TCC - 750 ppm/K)

### RATED VOLTAGE

- 5.0 kV<sub>p</sub>
- 9.0 kV<sub>p</sub>

### DIELECTRIC STRENGTH TEST

200 % of rated AC voltage (50 Hz, 5 minutes)

### DISSIPATION FACTOR

- R7: max. 0.07 % (1 MHz)
- R16: max. 0.04 % (1 MHz)
- R42, R85: max. 0.05 % (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 <sub>p</sub> )	RATED POWER <sup>(1)</sup> (kvar)	RATED CURRENT (A <sub>RMS</sub> )		
<b>TYPE TOS 016010</b>							
BS016010BE915##BF1	R7	1.5	5.0	3.0	3.0		
BS016010BE920##BF1		2.0					
BS016010BE930##BF1		3.0					
BS016010BE940##BF1		4.0					
BS016010BE950##BG1	R16	5.0					
BS016010BE960##BG1		6.0					
BS016010BE970##BH1	R42	7.0		4.0	4.0		
BS016010BE980##BH1		8.0					
BS016010BE100##BH1		10					
BS016010BE120##BH1		12					
BS016010BE160##BH1		16					
BS016010BE200##BJ1		R85				20	5.0
BS016010BE250##BJ1	25						
BS016010BE300##BJ1	30						
BS016010BE400##BJ1	40						
BS016010BE500##BJ1	50						
<b>TYPE TOS 025016</b>							
BS025016WC920##BF1	R7	2.0	9.0		5.0	5.0	
BS025016WC930##BF1		3.0					
BS025016WC940##BF1		4.0					
BS025016WC950##BF1		5.0					
BS025016WC960##BF1		6.0					
BS025016WC970##BF1		7.0					
BS025016WC980##BG1	R16	8.0		8.0	6.0		
BS025016WC100##BG1		10					
BS025016WC120##BH1	R42	12				10	10
BS025016WC160##BH1		16					
BS025016WC200##BH1		20					
BS025016WC250##BH1		25					
BS025016WC300##BJ1	R85	30		10	10		
BS025016WC400##BJ1		40					
BS025016WC500##BJ1		50					
BS025016WC600##BJ1		60					
BS025016WC700##BJ1		70					
BS025016WC800##BJ1		80					
BS025016WC101##BJ1		100					

**Notes**

- # 14<sup>th</sup> to 15<sup>th</sup> digit: capacitance tolerance code < 10 pF: ± 2 pF = 15; ± 1 pF = 14; ± 0.5 pF = 13  
 ≥ 10 pF: ± 20 % = 38; ± 10 % = 36; ± 5 % = 33

(1) The surface temperature during operation must not exceed +100 °C

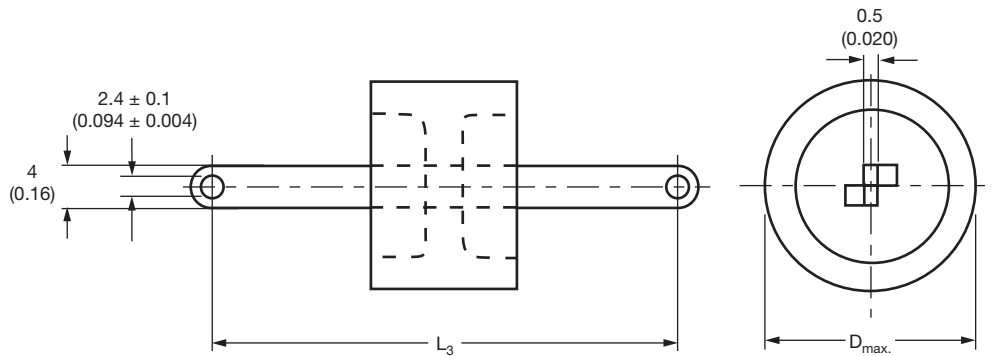
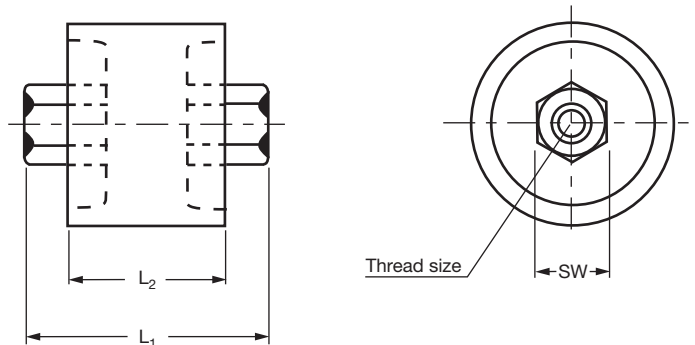


SAP PART NUMBER AND ELECTRICAL DATA					
PART NUMBER	CERAMIC	CAP. VALUES (pF)	RATED VOLTAGE (kV <sub>p</sub> )	RATED POWER <sup>(1)</sup> (kvar)	RATED CURRENT (A <sub>RMS</sub> )
<b>TYPE TOF 016010</b>					
BF016010BE915##BF1	R7	1.5	5.0	3.0	3.0
BF016010BE920##BF1		2.0			
BF016010BE930##BF1		3.0			
BF016010BE940##BF1		4.0			
BF016010BE950##BG1	R16	5.0			
BF016010BE960##BG1		6.0			
BF016010BE970##BH1	R42	7.0		4.0	
BF016010BE980##BH1		8.0			
BF016010BE100##BH1		10			
BF016010BE120##BH1		12			
BF016010BE160##BH1		16			
BF016010BE200##BJ1	R85	20			5.0
BF016010BE250##BJ1		25			
BF016010BE300##BJ1		30			
BF016010BE400##BJ1		40			
BF016010BE500##BJ1		50			
<b>TYPE TOF 025016</b>					
BF025016WC920##BF1	R7	2.0	9.0	5.0	5.0
BF025016WC930##BF1		3.0			
BF025016WC940##BF1		4.0			
BF025016WC950##BF1		5.0			
BF025016WC960##BF1		6.0			
BF025016WC970##BF1		7.0			
BF025016WC980##BG1	R16	8.0		8.0	6.0
BF025016WC100##BG1		10			
BF025016WC120##BH1	R42	12			
BF025016WC160##BH1		16			
BF025016WC200##BH1		20			
BF025016WC250##BH1		25			
BF025016WC300##BJ1		R85		30	10
BF025016WC400##BJ1	40				
BF025016WC500##BJ1	50				
BF025016WC600##BJ1	60				
BF025016WC700##BJ1	70				
BF025016WC800##BJ1	80				
BF025016WC101##BJ1	100				

**Notes**

- # 14<sup>th</sup> to 15<sup>th</sup> digit: capacitance tolerance code < 10 pF: ± 2 pF = 15; ± 1 pF = 14; ± 0.5 pF = 13  
 ≥ 10 pF: ± 20 % = 38; ± 10 % = 36; ± 5 % = 33
- (1) The surface temperature during operation must not exceed +100 °C

**DIMENSIONS** in millimeters (inches)

**TOF**

**TOS**


TYPE	TOF 016010	TOS 016010	TOF 025016	TOS 025016
Diameter $D_{max}$	16 (0.63)	16 (0.63)	25 (0.98)	25 (0.98)
Thread size	-	M5 4.5 (0.177) depth	-	M6 7 (0.28 depth)
Length $L_1$ max. <sup>(1)</sup>	-	23 (0.91)	-	35 (1.38)
Length $L_2$ max. <sup>(1)</sup>	10 (0.39)	10 (0.39)	16 (0.63)	16 (0.63)
Length $L_3$ max. <sup>(1)</sup>	49 max. (1.93 max.)	-	55 max. (2.17 max.)	-
SW	-	8 (0.31) HEX	-	10 (0.39) HEX
Allowable torque <sup>(2)</sup>	-	3.5 Nm (31 lbf in)	-	5.0 Nm (44 lbf in)

**Notes**

- <sup>(1)</sup> Dimension  $L_1$ ,  $L_2$ , and  $L_3$  will vary depending upon capacitance value  
<sup>(2)</sup> Use wrenches when tightening the screws and nuts on both ends of the capacitor

**RELATED DOCUMENTS**

General Information

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



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