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_p)	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_p
- 9.0 kV_p

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

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SAP PART NUMBER AND ELECTRICAL DATA					
PART NUMBER	**CERAMIC**	**CAP. VALUES (pF)**	**RATED VOLTAGE (kV_p)**	**RATED POWER [1] (kvar)**	**RATED CURRENT (A_{RMS})**
TYPE TOS 016010					
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			
TYPE TOS 025016					
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			
BS025016WC100##BG1		10			
BS025016WC120##BH1	R42	12		8.0	6.0
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

- # 14th to 15th 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

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BF016010BE950##BG1	R16	5.0			
BF016010BE960##BG1		6.0			
BF016010BE970##BH1	R42	7.0		4.0	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			
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BF025016WC101##BJ1		100			

Notes

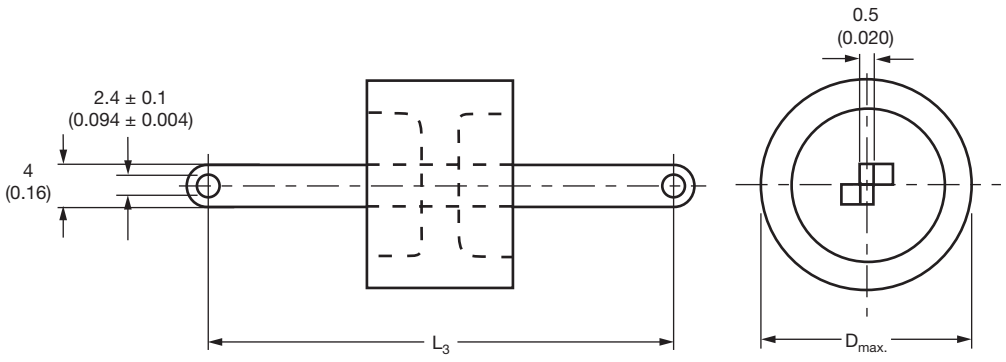
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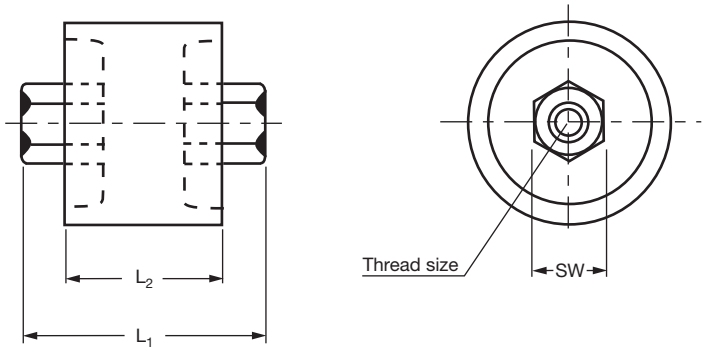
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DIMENSIONS in millimeters (inches)

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 $L_{1\ max.}$ (1)	-	23 (0.91)	-	35 (1.38)
Length $L_{2\ max.}$ (1)	10 (0.39)	10 (0.39)	16 (0.63)	16 (0.63)
Length $L_{3\ max.}$ (1)	49 max. (1.93 max.)	-	55 max. (2.17 max.)	-
SW	-	8 (0.31) HEX	-	10 (0.39) HEX
Allowable torque (2)	-	3.5 Nm (31 lbf in)	-	5.0 Nm (44 lbf in)

Notes

(1) Dimension L_1, L_2, and L_3 will vary depending upon capacitance value

(2) Use wrenches when tightening the screws and nuts on both ends of the capacitor

RELATED DOCUMENTS

General Information	www.vishay.com/doc?22071

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