

## RF Power Barrel Capacitors with Screw Terminals, Class 1 and Class 2 Ceramic



QUICK REFERENCE DATA		
DESCRIPTION	VALUE	
Ceramic Class	1	2
Ceramic Dielectric	C0G, U2J, S3L	X7R
Type	TOS 030033	
Voltage (V <sub>p</sub> )	15 000	15 000
Min. Capacitance (pF)	10	750
Max. Capacitance (pF)	500	1500
Mounting	Screw terminal	

### MATERIAL

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

Connection terminals:  
thread terminal, brass, silver plated.

Allowable torque: 2.9 Nm (26 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

- High voltage power rating
- Geometry minimizes inductance, optimizes voltage withstand and maximizes heat radiation

### APPLICATIONS

- Industrial and medical RF power supply
- Filter, bypass and coupling circuits
- Antenna couplers
- Induction heating equipment

### CAPACITANCE RANGE

10 pF to 1.5 nF

### CAPACITANCE TOLERANCE

- Class 1: ± 10 %
- Class 2: ± 20 %

### CERAMIC DIELECTRICS

- Class 1: C0G, U2J, S3L
- Class 2: X7R

### RATED VOLTAGE

15 kV<sub>DC</sub>

### DIELECTRIC STRENGTH TEST

150 % of rated voltage (15 900 V<sub>RMS</sub>, 50 Hz, 3 minutes)

### DISSIPATION FACTOR

C0G, U2J: max. 0.05 % (1 MHz)

S3L: max. 0.20 % (1 MHz)

X7R: max. 2.5 % (1 kHz)

### INSULATION RESISTANCE

Min. 100 000 MΩ (at 25 °C)

### OPERATING TEMPERATURE RANGE

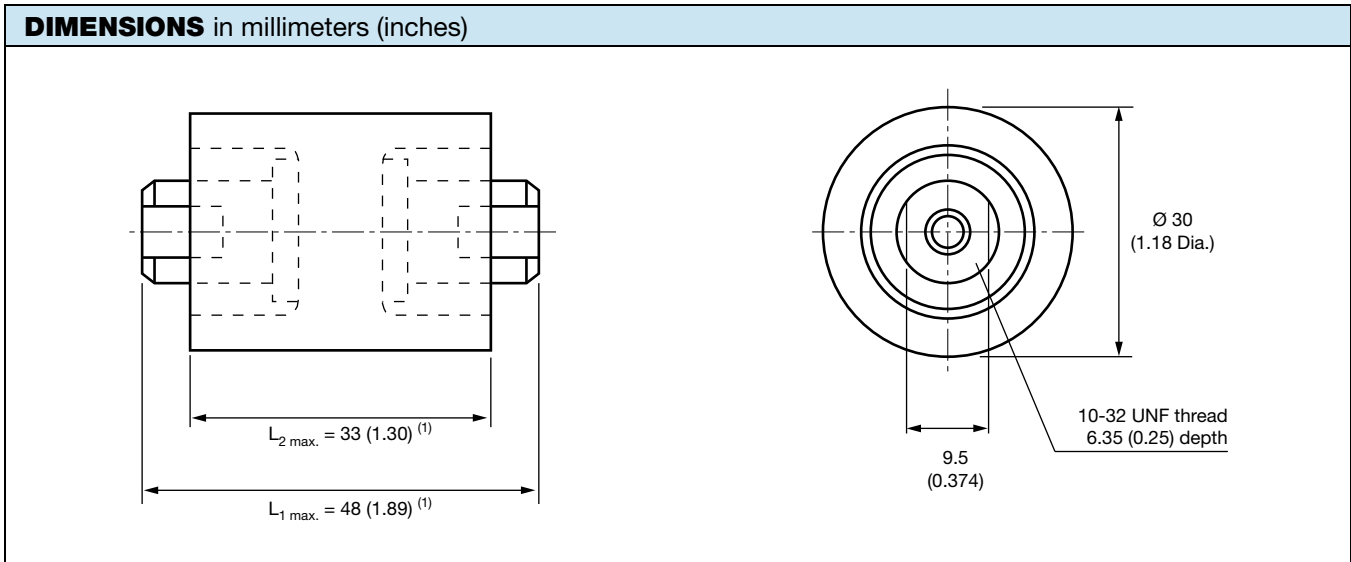
Class 1: -55 °C to +100 °C

Class 2: -55 °C to +85 °C

SAP PART NUMBER AND ELECTRICAL DATA									
PART NUMBER	CERAMIC	CAP. VALUES (pF)	RATED VOLTAGE (kV <sub>DC</sub> )	MAXIMUM POWER RATING <sup>(1)</sup>			MAXIMUM CURRENT RATING		
				1.0 MHz (kvar)	10 MHz (kvar)	30 MHz (kvar)	1.0 MHz (A <sub>RMS</sub> )	10 MHz (A <sub>RMS</sub> )	30 MHz (A <sub>RMS</sub> )
BS030033BJ10036AC1	C0G (NP0)	10	15	7.0	35	35	0.7	4.7	8.1
BS030033BJ25036AC1		25		18	35	35	1.7	7.4	13
BS030033BJ50036AC1		50		35	35	35	3.3	11	18
BS030033BJ75036AL1	U2J (N750)	75		35	35	35	4.1	13	22
BS030033BJ10136AL1		100		35	35	35	4.7	15	26
BS030033BJ15136AL1		150		22	22	22	4.6	14	25
BS030033BJ20136AL1		200		15	15	15	4.3	14	24
BS030033BJ30136AQ1	S3L (N3300)	300		5	5	5	3.1	10	17
BS030033BJ40136AQ1		400		5	5	5	3.6	11	19
BS030033BJ50136AQ1		500		5	5	5	4.0	13	22
BS030033BJ75138AV1	X7R (R2000)	750		0.5	0.5	0.5	1.5	5.0	8.4
BS030033BJ10238AV1		1000		0.5	0.5	0.5	1.8	6.0	9.7
BS030033BJ12238AV1		1200		0.5	0.5	0.5	2.0	6.0	12
BS030033BJ15238AV1		1500		0.5	0.5	0.5	2.2	6.0	12

**Notes**

- # 14<sup>th</sup> to 15<sup>th</sup> digit: capacitance tolerance code ± 10 % = 36; ± 20 % = 38
- Other capacitance values or metric threads are available on request
- <sup>(1)</sup> The surface temperature during operation must not exceed +100 °C


**Notes**

- Use wrenches when tightening the screws and nuts on both end of the capacitor
- <sup>(1)</sup> Dimension L<sub>1</sub> and L<sub>2</sub> will vary depending upon capacitance value

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



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