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, N5600	X7R, Y5U
Type	TOS 020016	
Voltage (V_p)	7500	7500
Min. Capacitance (pF)	10	400
Max. Capacitance (pF)	300	2500
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: 1.47 Nm (13 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

APPLICATIONS

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

CAPACITANCE RANGE

10 pF to 2.5 nF

CAPACITANCE TOLERANCE

- Class 1: ± 10 %
- Class 2: ± 20 %

CERAMIC DIELECTRICS

- Class 1: C0G, U2J, N5600
- Class 2: XR7, Y5U

RATED VOLTAGE

7.5 kV_{DC}

DIELECTRIC STRENGTH TEST

150 % of rated voltage (8000 V_{RMS}, 50 Hz, 3 minutes)

DISSIPATION FACTOR

- C0G, U2J: max. 0.05 % (1 MHz)
- N5600: max. 0.20 % (1 MHz)
- X7R, Y5U: max. 2.5 % (1 kHz)

INSULATION RESISTANCE

- C0G, U2J, N5600, X7R: min. 100 000 MΩ (at 25 °C)
- Y5U: min. 50 000 MΩ (at 25 °C)

OPERATING TEMPERATURE RANGE

- Class 1: -55 °C to +100 °C
- Class 2: -55 °C to +85 °C

For technical questions, contact: powcap@vishay.com

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SAP PART NUMBER AND ELECTRICAL DATA

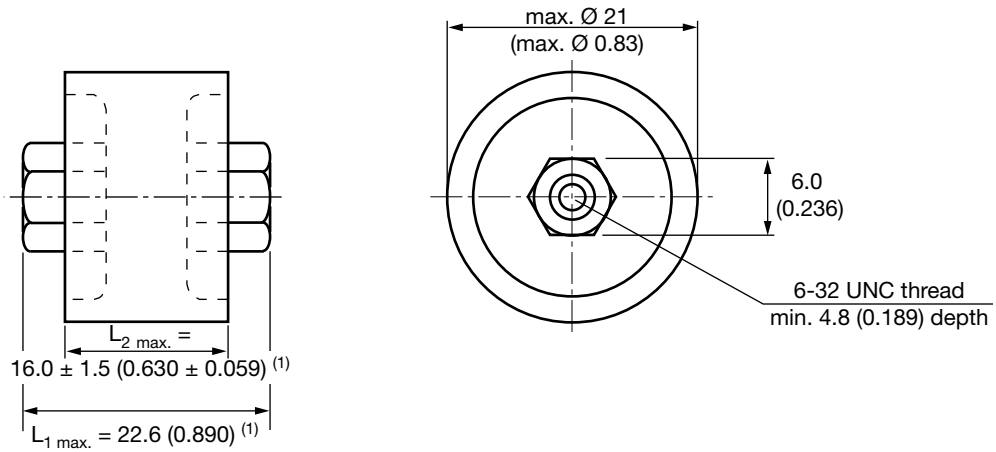
PART NUMBER	CERAMIC	CAP. VALUES (pF)	RATED VOLTAGE (kV_{DC})	MAX. POWER RATING (1)			MAX. CURRENT RATING		
				1.0 MHz (kvar)	10 MHz (kvar)	30 MHz (kvar)	1.0 MHz (A_{RMS})	10 MHz (A_{RMS})	30 MHz (A_{RMS})
BS020016VZ10036AC1	C0G (NP0)	10	7.5	1.7	10	10	0.3	2.5	4.3
BS020016VZ15036AC1		15		3.2	10	10	0.6	3.1	5.3
BS020016VZ25036AC1		25		4.4	10	10	0.8	4.0	6.9
BS020016VZ30036AC1		30		5.3	10	10	1.0	4.4	7.5
BS020016VZ40036AC1		40		7.0	10	10	1.3	5.1	8.7
BS020016VZ50036AC1		50		8.8	10	10	1.7	5.6	9.7
BS020016VZ75036AL1	U2J (N750)	75		10	10	7.0	2.2	6.9	10
BS020016VZ10136AL1		100		10	10	5.3	2.5	7.9	10
BS020016VZ15136AS1	N5600	150		5.0	5.0	3.5	2.2	6.9	10
BS020016VZ20136AS1		200		5.0	5.0	2.7	2.5	7.9	10
BS020016VZ30136AS1		300		5.0	5.0	1.8	3.1	9.7	10
BS020016VZ40138AT1	X7R	400		0.4	0.4	0.4	1.0	3.2	5.5
BS020016VZ50138AT1		500		0.4	0.4	0.4	1.1	3.6	6.1
BS020016VZ60138AU1		600		0.4	0.4	0.4	1.2	3.9	6.7
BS020016VZ80138AU1		800		0.4	0.4	0.4	1.4	4.5	7.8
BS020016VZ10238AV1		1000		0.2	0.2	0.2	1.1	3.6	6.1
BS020016VZ15238AV1		1500		0.2	0.2	0.2	1.4	4.3	7.5
BS020016VZ20238BA1	Y5U	2000		0.2	0.2	0.2	1.6	5.0	8.7
BS020016VZ25238BA1		2500		0.2	0.2	0.2	1.8	5.6	9.7

Notes

- # 14th to 15th digit: capacitance tolerance code ± 10 % = 36; ± 20 % = 38
- RoHS-compliant parts on request

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

DIMENSIONS in millimeters (inches)



Note

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

RELATED DOCUMENTS

General Information	www.vishay.com/doc?22071

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