

XBL Series

eXtra Broadband Capacitor



DESCRIPTION

- EIA 0402 Case size
- Capacitance: 100nF
- Low insertion loss up to 40 GHz
- RoHS Compliant

APPLICATIONS

- Optoelectronics / High-speed data
- Broadband test equipment & applications
- Broadband microwave / millimeter wave amplifiers and oscillators

CIRCUIT APPLICATIONS

- DC Blocking, Coupling, Bypassing

ELECTRICAL AND ENVIRONMENTAL SPECIFICATIONS

Electrical specifications

Parameter	Value
Capacitance	100nF
Tolerances	K ($\pm 10\%$)
Working voltage (WV_{DC})	16V
Temperature coefficient	X7R
Insulation Resistance	$10^9 \Omega$ min.
Insertion Loss @ 10Ghz (typical)	<0.3 dB
Insertion Loss @ 20Ghz (typical)	<0.5 dB
Insertion Loss @ 40Ghz (typical)	<1.2 dB
DF	$\leq 5\%$
Dielectric Withstanding (test voltage applied for 5 seconds)	1.5 WV_{DC}

Mechanical specification

Parameter	Value	Comment
Case size	L	0402
Termination type		
	Code	
Standard (Tin-plated Nickel)	S	
Packaging		
	Code	
Tape and reel	E	

Environmental specifications

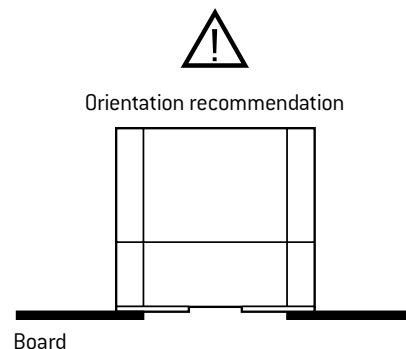
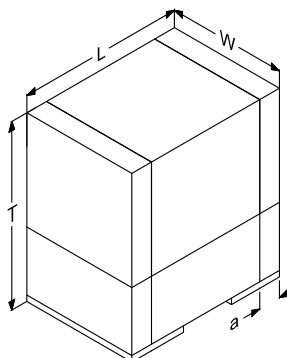
Parameter	Value
Life Test	1000 hours, +125°C at 1.5 WV_{DC}
Moisture Resistance	240 hours, 85% relative humidity at 85°C (ESA/SCC n°3009)

HOW TO ORDER

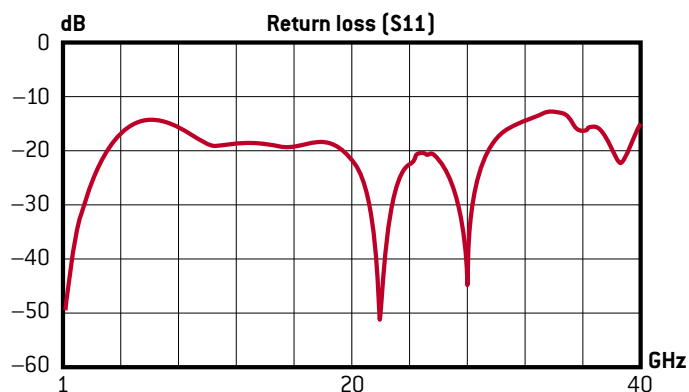
160	XB	L	104	K	S	E
Voltage code	Dielectric	Case size	Capacitance code	Tolerance code	Termination code	Tape and reel
160 = 16V	X7R	L = 0402	104 = 100nF	K = $\pm 10\%$	S = Standard: tin-plated nickel	E = horizontal orientation

OUTLINE DIMENSIONS in inches (mm)

Size	0402	
Dimensions inches (mm)	L	0.039 ± 0.008 (1 ± 0.2)
	W	0.236 ± 0.004 (0.6 ± 0.1)
	T	0.039 max. / 0.033 typical (1 max. / 0.85 typical)
	a	0.010 ± 0.006 (0.25 ± 0.15)



PERFORMANCE CHARACTERISTICS



Typical responses of S11 and S21 Measurements on a PTFE 50 Ohm substrate