

UBL Series

Ultra-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 (± 10%)	
Working voltage (WV _{DC})	16V	
Temperature coefficient	X7R	
Insulation Resistance	10 ⁹ Ω min.	
Insertion Loss @ 10Ghz (typical)	<0.5 dB	
Insertion Loss @ 20Ghz (typical)	<1.2 dB	
Insertion Loss @ 40Ghz (typical)	<1.5 dB	
DF	≤5%	
Dielectric Withstanding (test voltage applied for 5 seconds)	2 WV _{DC}	

Mechanical specification		
Parameter	Value	Comment
Case size	L	0402

Termination type	Code	
Standard (Tin-plated Nickel)	S	

Packaging	Code	Quantity
Parts per Reel	E	10 000

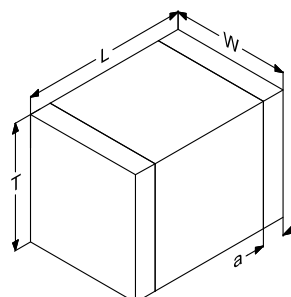
Environmental specifications	
Parameter	Value
Life Test	1000 hours, +125°C at 1.5 WV _{DC}
Moisture Resistance	240 hours, 85% relative humidity at 85°C (ESA/SCC n°3009)

HOW TO ORDER

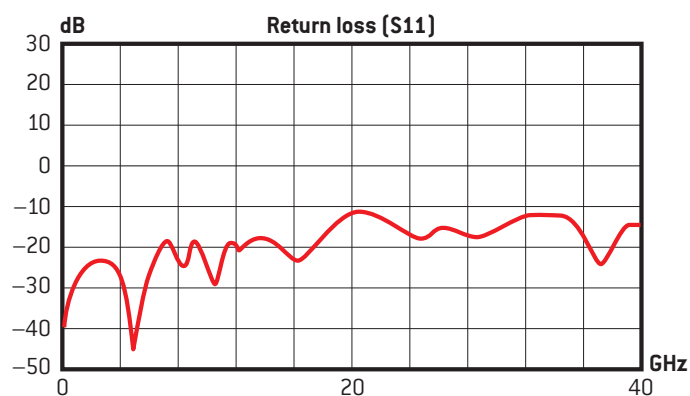
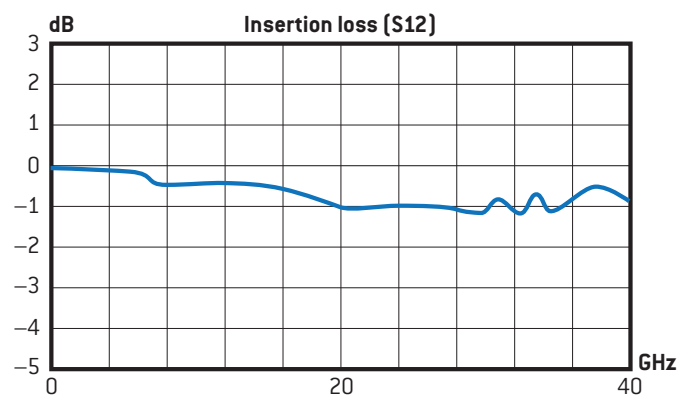
160	UB	L	104	K	S	E
Voltage code	Dielectric	Case size	Capacitance code	Tolerance code	Termination code	Tape and reel
160 = 16V	X7R	L = 0402	104 = 100nF	K = ± 10%	S = Standard: tin-plated nickel	E = horizontal orientation

OUTLINE DIMENSIONS in inches (mm)

Size	0402
L	0.039 ± 0.004 (1 ± 0.1)
W	0.197 ± 0.004 (0.5 ± 0.1)
T	0.236 max. (0.6 max.)
a	0.010 ± 0.004 (0.25 ± 0.1)



PERFORMANCE CHARACTERISTICS



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