

# GX Series



## Ultra Broad Band Capacitor



### ADVANTAGES

- Ultra-Broadband performance
- Ultra-Low Insertion Loss
- X5R & X7S Characteristics
- Excellent Return Loss

### APPLICATIONS

- Semi-Conductor Data Communications Customers
- Receiver Optical Sub-Assemblies
- Transimpedance Amplifier Customers
- Test Equipment Manufactures

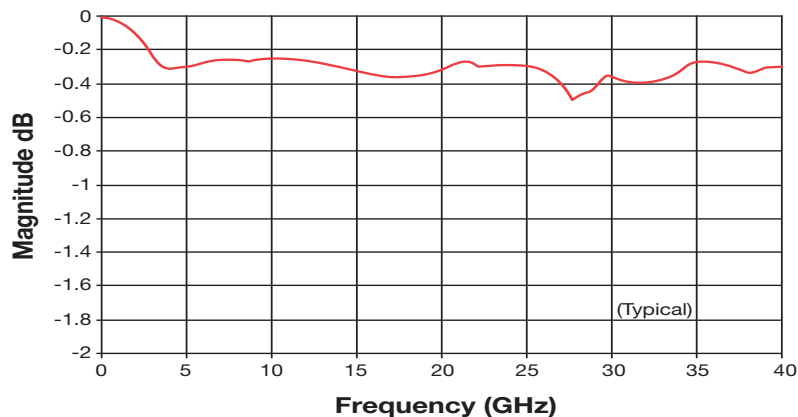
The GX Series was developed specifically to address DC Blocking issues from ~16KHz (-3dB roll-off) to 40GHz. Most applications will experience resonance-free insertion loss of <0.5dB thru at least 40GHz. Insertion loss at higher frequencies is in part dependent on installation parameters. Using AVX's patented precision thin film termination process, the part is designed to be completely orientation insensitive with a standard EIA 0402 footprint to minimize board space requirements. Both

Ni/Sn and Ni/Au terminations are available to cover a wide range of attachment processes. All GX parts are RoHS compliant.

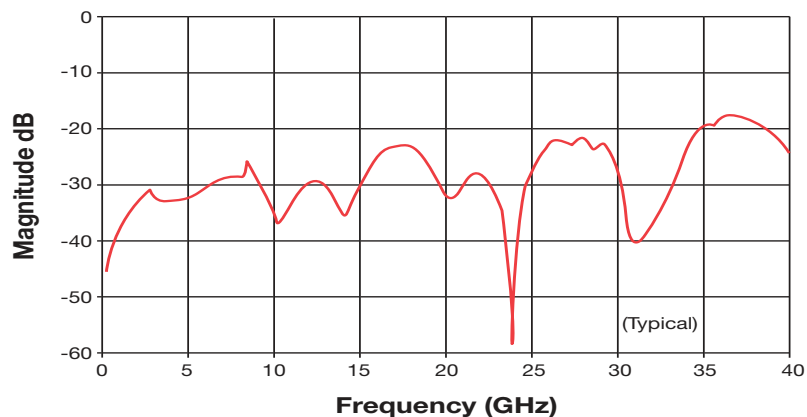
Au terminated units are wire bondable. Users may, therefore, find these devices equally useful in bypass applications when wire bonding is a necessary part of the manufacturing process.

More information can be obtained by contacting the factory or your local AVX representative.

### GX02 Series – Insertion Loss (S21)



### GX02 Series – Return Loss (S11)



#### Test Parameters:

Rogers RO4350 Board (T = 10 mils); Trace width = 22 mils; Gap = 24 mils; 50 ohm (nominal) characteristic impedance



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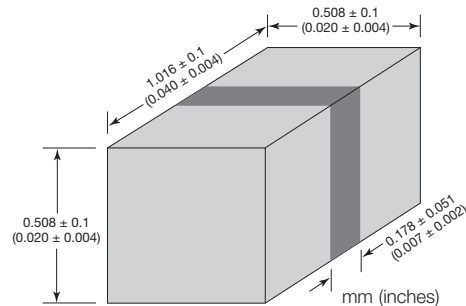


## Ultra Broad Band Capacitor

### ELECTRICAL SPECIFICATIONS

Capacitance	0.1 $\mu\text{F} \pm 10\%$ , 0.1 $\mu\text{F} \pm 20\%$
Voltage Rating/Operating Temperature	16 VDC @ 85°C; 10 VDC @ 125°C
Dielectric Withstanding Voltage	250% WVDC
Insulation Resistance	10,000 Meg Ohms @ 25°C; 1,000 Meg Ohms @ 125°C
Temperature Coefficient	16 VDC X5R ( $\pm 15\%$ ); 10 VDC X7S ( $\pm 22\%$ )

### MECHANICAL SPECIFICATIONS



### HOW TO ORDER

<b>GX</b>	<b>02</b>	<b>YD</b>	<b>104</b>	<b>K</b>	<b>A</b>	<b>T</b>	<b>2</b>
Style	Case Size 02 = 0402	Voltage/Dielectric YD = 16Vdc/X5R 10Vdc/X7S	Capacitance 104 = 0.1 $\mu\text{F}$ EIA Cap Code in pF	Tolerance K = $\pm 10\%$	Failure Rate A = Std	Termination T = Ni-Sn (Standard) 7 = Ni-Au	Packaging 2 = 4000 pcs, 7" T&R 2-500 = 500 pcs, 7" T&R 2-1000 = 1000 pcs, 7" T&R

### ADDITIONAL MICROWAVE PRODUCTS

AVX also manufactures a broad range of SLC (Single Layer Ceramic) products utilizing high k GBBL dielectrics especially suitable for space constrained broadband bypass/decoupling applications. A variety of voltage ratings are available and all dielectrics are suitable for operation from -55°C to +125°C. All SLC products are RoHS compliant.

Style	GH/GB10-90	GH/GB01-06	GH/GB01-06	GD10-55	
Dielectric	Z	Maxi	Maxi+	Ultra Maxi	
k	2.5K-18K	20K	30K	60K	
TC	X7S	X7R	X7R	X7R	
Cap Range	8-5400pF	68-8200pF	330-10000pF	180-10000pF	
Rating	50/100VDC	50VDC	50VDC	6.3, 16, 25VDC	
Nom	mm sq	0.25 / 2.28	0.38 / 2.28	0.38 / 2.28	0.25 / 1.40
Sizes	inches sq	0.010 / 0.090	0.015 / 0.090	0.015 / 0.090	0.010 / 0.055

