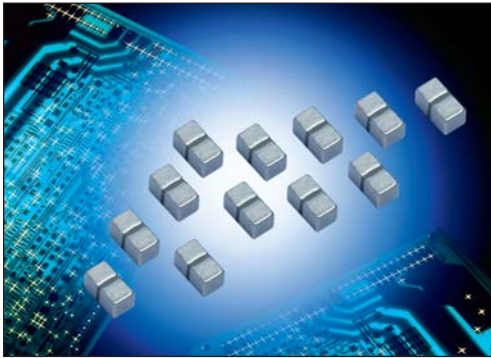


# GX03 Series



## Ultra-Broadband Capacitor



### ADVANTAGES

- Ultra-Broadband performance
- Ultra-Low Insertion Loss
- X7R Characteristics
- Excellent Return Loss

### APPLICATIONS

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

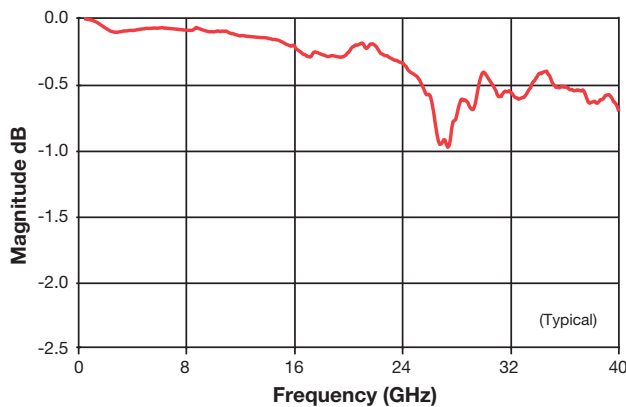
The GX03 Series was developed specifically to address DC Blocking issues from ~16KHz (-3dB roll-off) to 40GHz in applications requiring higher voltages than available in our other Broadband offerings. Rated at 50VDC from -55°C to +125°C with X7R TCC, GX03 products exhibit low insertion loss & excellent return loss. Using AVX's patented precision thin film termination process, the part is designed to be completely orientation insensitive with a standard EIA 0603 footprint to minimize board space requirements.

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

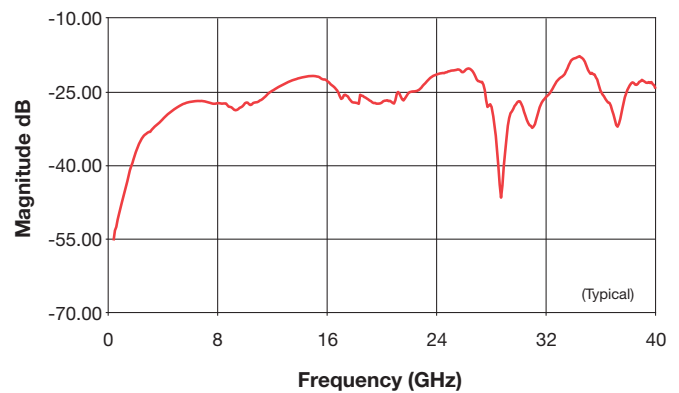
Au terminated units are wire bondable. Users may, therefore, find these devices useful in bypass applications when wire bonding is a necessary part of the manufacturing process.

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

### GX03 Series – Insertion Loss (S21)



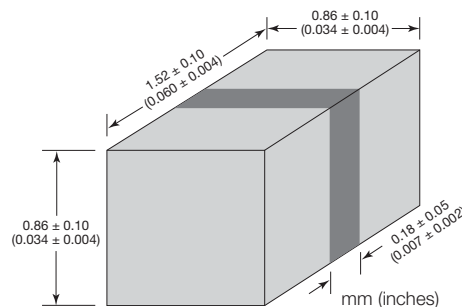
### GX03 Series – Return Loss (S11)



### Test Parameters:

Testing to 40GHz performed on Rodgers R04350 microstrip board (T = 10 mils); Trace width = 22 mils; Gap = 24 mils; 50 ohm (nominal) characteristic impedance. Modelithics model developed through testing on several different substrates including Alumina (T = 5 mils) measured through 65GHz. The modeled results presented for R04350 were for a pad width = 20 mils and a gap = 16 mils.

### MECHANICAL SPECIFICATIONS



# GX03 Series




## Ultra-Broadband Capacitor

### ELECTRICAL SPECIFICATIONS

Capacitance	0.1 $\mu\text{F} \pm 20\%$
Voltage Rating/Operating Temperature	50 VDC @ 125°C
Dielectric Withstanding Voltage	250% WVDC
Insulation Resistance	10,000 Meg Ohms @ 25°C; 1,000 Meg Ohms @ 125°C
Temperature Coefficient	X7R ( $\pm 15\%$ )

### HOW TO ORDER

<b>GX</b>	<b>03</b>	<b>5C</b>	<b>104</b>	<b>M</b>	<b>A</b>	<b>T</b>	<b>2</b>	
<b>Style</b>	<b>Case Size</b>	<b>Voltage/Dielectric</b>	<b>Capacitance</b>	<b>Tolerance</b>	<b>Failure Rate</b>	<b>Termination</b>	<b>Packaging</b>	
	03 = 0603	5C = 50Vdc/X7R	104 = 0.1 $\mu\text{F}$ EIA Cap Code in pF	M = $\pm 20\%$	A = Std	T = Ni-Sn (Standard) 7 = Ni-Au	2 = 4000 pcs 7" T&R 2-500 = 500 pcs 7" T&R 2-1000 = 1000 pcs 7" T&R	

# Mouser Electronics

Authorized Distributor

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[GX035C104MAT2-500](#) [GX035C104MAT2](#)