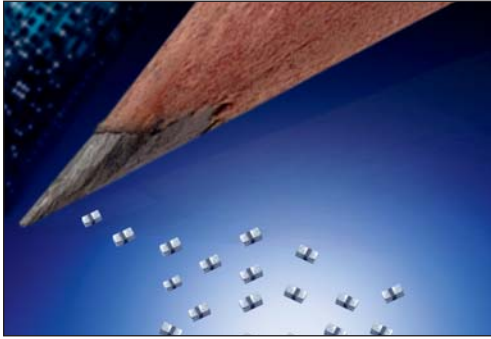


# GX Series



## 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

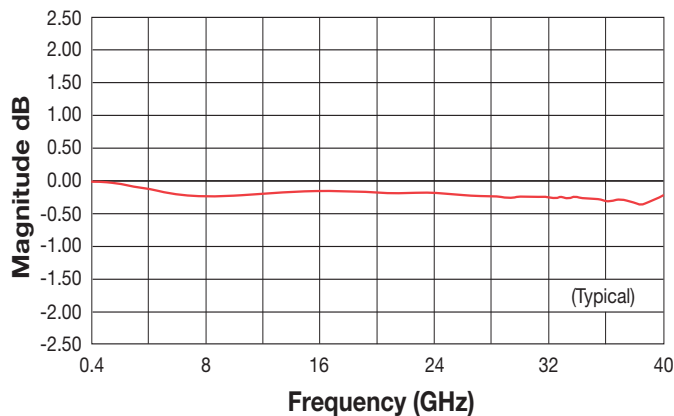
The GX Series was developed specifically to address DC Blocking issues from 160KHz (-3dB roll-off) to 40GHz. Most applications will experience resonance-free insertion loss of <0.5dB thru at least 40GHz. Insertion loss at higher frequencies is in part dependent on installation parameters. Using AVX's patented precision thin film termination process, the part is designed to be completely orientation insensitive with a standard EIA 0201 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.

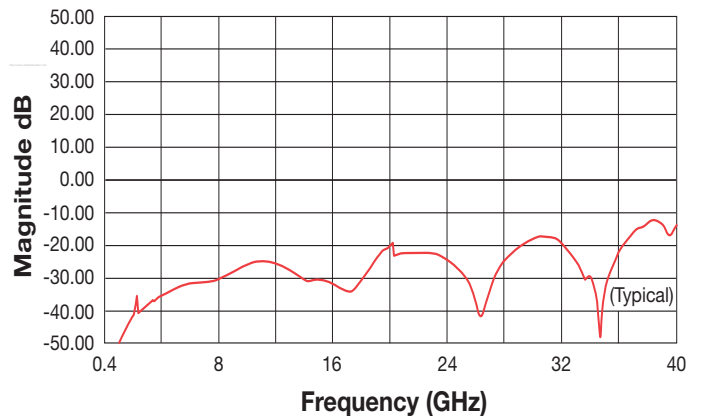
Au terminated units are wire bondable. Users may, therefore, find these devices equally useful in bypass applications when wire bonding is a necessary part of the manufacturing process.

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

**GX01 Series – Insertion Loss (S21)**



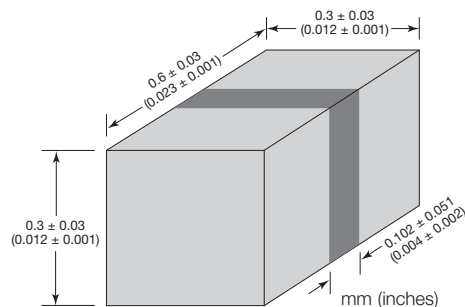
**GX01 Series – Return Loss (S11)**



### Test Parameters:

All testing done on 10-mil thick Rogers R03006 Microstrip board, with device under test subtending a 10 mil gap in a 13.4 mil wide center trace (nominal 50 Ohm characteristic impedance)

## MECHANICAL SPECIFICATIONS



# GX Series



## Ultra Broad Band Capacitor

### ELECTRICAL SPECIFICATIONS

|                                      |                                                   |
|--------------------------------------|---------------------------------------------------|
| Capacitance                          | 0.01 $\mu$ F +100% - 0%                           |
| Voltage Rating/Operating Temperature | 10 VDC @ 85°C; 6.3 VDC @ 125°C                    |
| Dielectric Withstanding Voltage      | 250% WVDC                                         |
| Insulation Resistance                | 10,000 Meg Ohms @ 25°C; 1,000 Meg Ohms @ 125°C    |
| Temperature Coefficient              | 10 VDC X5R ( $\pm$ 15%); 6.3 VDC X7S ( $\pm$ 22%) |

### HOW TO ORDER

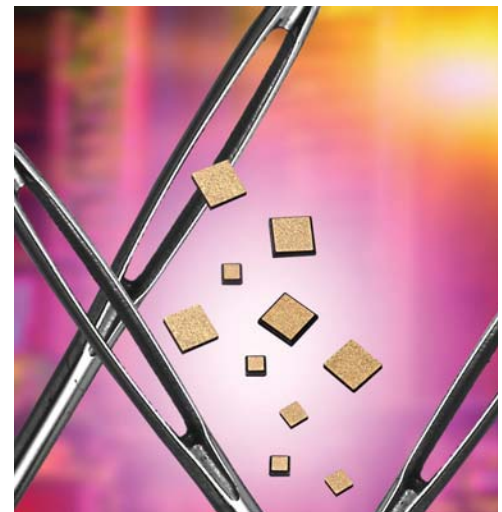
| GX           | 01               | ZD                           | 103                                         | P                | A                   | T                                    | D                                                                            |
|--------------|------------------|------------------------------|---------------------------------------------|------------------|---------------------|--------------------------------------|------------------------------------------------------------------------------|
| <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>                                                             |
|              | 01 = 0201        | ZD = 10Vdc/X5R<br>6.3Vdc/X7S | 103 = 0.01 $\mu$ F<br>EIA Cap Code<br>in pF | P = +100%<br>-0% | A = Std             | T = Ni-Sn<br>(Standard)<br>7 = Ni-Au | D = 4000 pcs, 3" T&R<br>D-500 = 500 pcs, 3" T&R<br>D-1000 = 1000 pcs, 3" T&R |

— = Under development

### ADDITIONAL MICROWAVE PRODUCTS

AVX also manufactures a broad range of SLC (Single Layer Ceramic) products utilizing high k GBL 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/GB01/06 | GH/GB01/06    | GH/GB01/06    | GH10-55       |
|-------------------|------------|---------------|---------------|---------------|
| <b>Dielectric</b> | Z          | Maxi          | Maxi+         | Ultra Maxi    |
| <b>k</b>          | 2.5K-18K   | 20K           | 30K           | 60K           |
| <b>TC</b>         | X7S        | X7R           | X7R           | X7R           |
| <b>Cap Range</b>  | 20-4700pF  | 68-8200pF     | 330-10000pF   | 200-6500pF    |
| <b>Rating</b>     | 50/100VDC  | 50VDC         | 50VDC         | 25VDC         |
| <b>Nom</b>        | mm sq      | 0.38 / 2.28   | 0.38 / 2.28   | 0.38 / 2.28   |
| <b>Sizes</b>      | inches sq  | 0.015 / 0.090 | 0.015 / 0.090 | 0.010 / 0.055 |



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