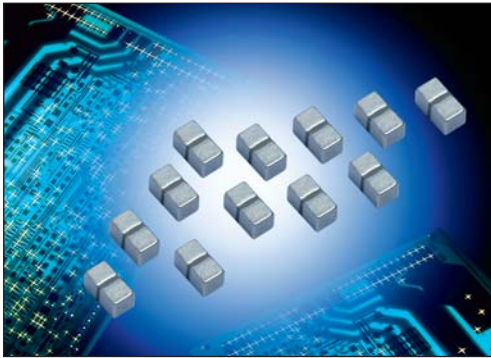


# GX Series



## Ultra Broad Band 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

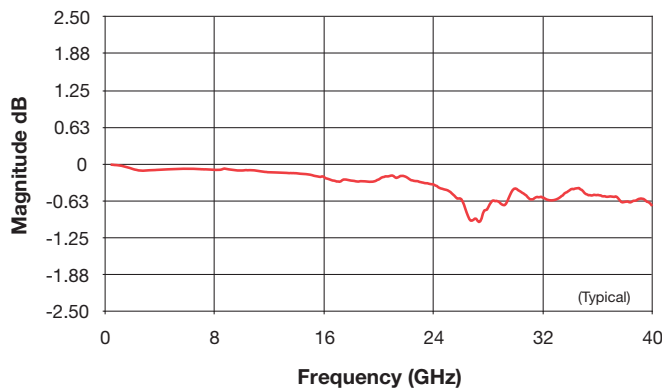
The GX03 Series was developed specifically to address DC Blocking issues from ~16KHz (-3dB roll-off) to 40GHz in applications requiring higher voltages than available in our other Broadband offerings. Rated at 50VDC from -55°C to +125°C with X7R TCC, GX03 products exhibit low insertion loss & excellent 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.

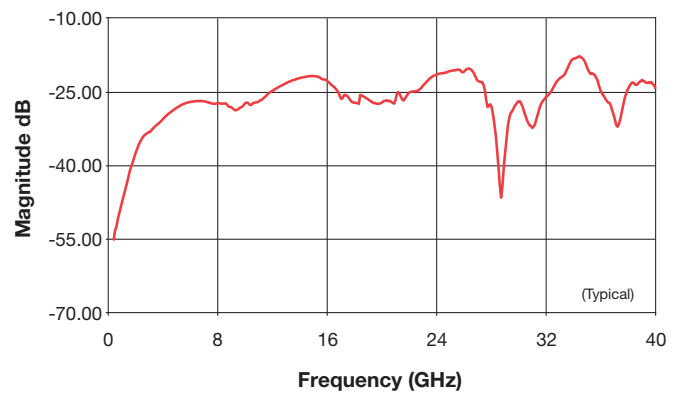
Au terminated units are wire bondable. Users may, therefore, find these devices useful in bypass applications when wire bonding is a necessary part of the manufacturing process.

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

### GX03 Series – Insertion Loss (S21)



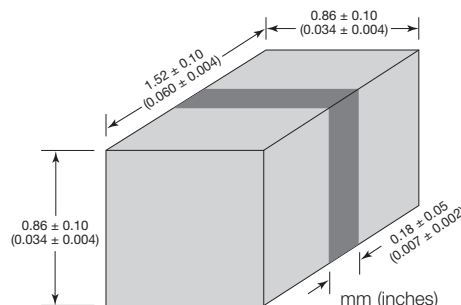
### GX03 Series – Return Loss (S11)



### Test Parameters:

Testing to 40GHz performed on Rogers 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



# GX Series



## Ultra Broad Band 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

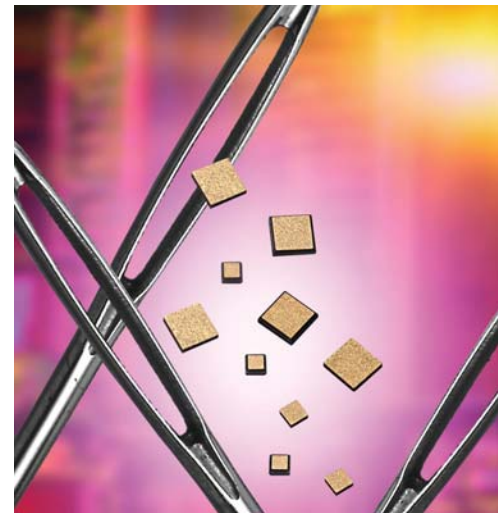
|              |                               |   |  |                                    |                                |  |  |
|--------------|-------------------------------|---|--|------------------------------------|--------------------------------|--|--|
| <b>GX</b>    | <b>03</b>          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

|                   |            |               |               |               |               |
|-------------------|------------|---------------|---------------|---------------|---------------|
| <b>Style</b>      | 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   | 0.25 / 1.40   |
| <b>Sizes</b>      | inches sq  | 0.015 / 0.090 | 0.015 / 0.090 | 0.015 / 0.090 | 0.010 / 0.055 |



NOTICE: Specifications are subject to change without notice. Contact your nearest AVX Sales Office for the latest specifications. All statements, information and data given herein are believed to be accurate and reliable, but are presented without guarantee, warranty, or responsibility of any kind, expressed or implied. Statements or suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. The user should not assume that all safety measures are indicated or that other measures may not be required. Specifications are typical and may not apply to all applications.

© AVX Corporation

#### AMERICAS

AVX Greenville, SC  
Tel: 864-967-2150

AVX Northwest, WA  
Tel: 360-699-8746

AVX Midwest, IN  
Tel: 317-861-9184

AVX Mid/Pacific, CA  
Tel: 408-988-4900

AVX Northeast, MA  
Tel: 617-479-0345

AVX Southwest, CA  
Tel: 949-859-9509

AVX Canada  
Tel: 905-238-3151

AVX South America  
Tel: +55-11-4688-1960

#### EUROPE

AVX Limited, England  
Tel: +44-1276-697000

AVX S.A.S., France  
Tel: +33-1-69-18-46-00

AVX GmbH, Germany  
Tel: +49-0811-95949-0

AVX SRL, Italy  
Tel: +39-02-614-571

AVX Czech Republic  
Tel: +420-57-57-57-521

AVX/ELCO UK  
Tel: +44-1638-675000

ELCO Europe GmbH  
Tel: +49-2741-299-0

AVX S.A., Spain  
Tel: +34-91-63-97-197

AVX Benelux  
Tel: +31-187-489-337

#### ASIA-PACIFIC

AVX/Kyocera (S) Pte Ltd.,  
Singapore  
Tel: +65-6286-7555

AVX/Kyocera, Asia, Ltd.,  
Hong Kong  
Tel: +852-2363-3303

AVX/Kyocera Yuhan Hoesa,  
South Korea  
Tel: +82-2785-6504

AVX/Kyocera HK Ltd.,  
Taiwan  
Tel: +886-2-2656-0258

AVX/Kyocera (M) Sdn Bhd,  
Malaysia  
Tel: +60-4228-1190

AVX/Kyocera International  
Trading Co. Ltd.,  
Shanghai  
Tel: +86-21-3255 1933

AVX/Kyocera Asia Ltd.,  
Shenzen  
Tel: +86-755-3336-0615

AVX/Kyocera International  
Trading Co. Ltd.,  
Beijing  
Tel: +86-10-6588-3528

AVX/Kyocera India  
Liaison Office  
Tel: +91-80-6450-0715

#### ASIA-KED

(KYOCERA Electronic  
Devices)

KED Hong Kong Ltd.  
Tel: +852-2305-1080/1223

KED Hong Kong Ltd.  
Shenzen  
Tel: +86-755-3398-9600

KED Company Ltd.  
Shanghai  
Tel: +86-21-3255-1833

KED Hong Kong Ltd. Beijing  
Tel: +86-10-5869-4655

KED Taiwan Ltd.  
Tel: +886-2-2950-0268

KED Korea Yuhan Hoesa,  
South Korea  
Tel: +82-2-783-3604/6126

KED (S) Pte Ltd.  
Singapore  
Tel: +65-6509-0328

Kyocera Corporation  
Japan  
Tel: +81-75-604-3449



<http://www.avx.com>

S-GX030M213-N

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[AVX:](#)

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