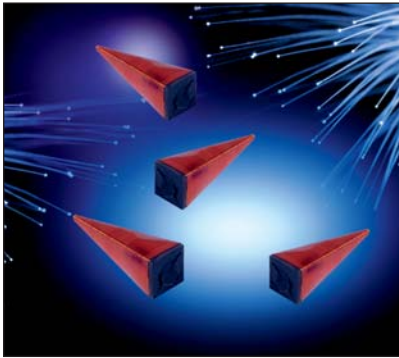


## Ultra Broad Band Inductor



### ADVANTAGES

- Ultra Broad Band Performance
- Ultra-Low Insertion Loss
- Excellent Return Loss Through 40 GHz
- Flat Frequency Response
- Part to Part Performance Repeatability
- Rugged Powdered Iron Core

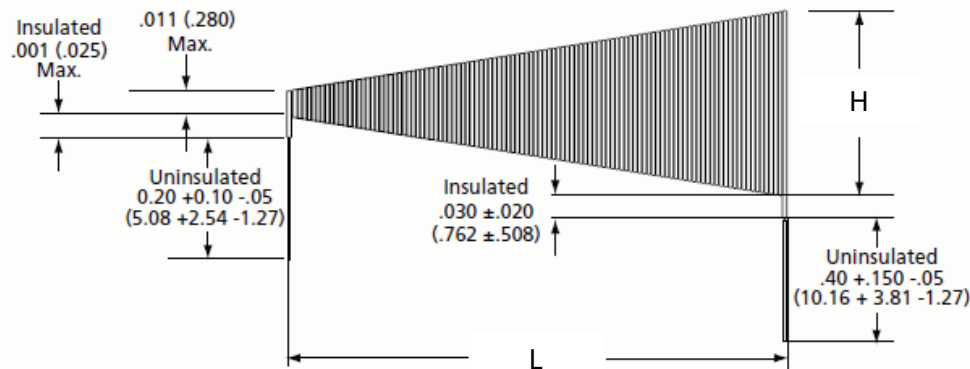
### APPLICATIONS

- Communication Customers
- Receiver Optical Sub-Assemblies
- Transimpedance Amplifier Customers
- Test Equipment Manufacturers

The GL Series was developed specifically to deliver repeatable and reliable Ultra Broad Band performance up through 40 + GHz. The GL Series of inductors provide Ultra-Low Insertion loss, excellent return loss and extreme part to part performance repeatability. The pyramid shape of the GL Series provides for maximum inductance in the space available. The GL Series was

developed using a powdered iron core and gold plated terminations that allow for easy use in hand solder applications. The combination of Flat Frequency Response with the Ultra-Low Insertion loss makes this an ideal component for optical data systems, transimpedance amplifiers and test equipment.

### MECHANICAL SPECIFICATIONS



inches (mm)

| Inductance (μH) | L                            | H                            | # of Turns           |
|-----------------|------------------------------|------------------------------|----------------------|
| 2               | 0.102 ± 0.002 (2.59 ± 0.051) | 0.065 ± 0.002 (1.65 ± 0.051) | 46 Turns #44 AWG Cu  |
| 6               | 0.182 ± 0.003 (4.62 ± 0.076) | 0.073 ± 0.002 (1.85 ± 0.051) | 80 Turns #44 AWG Cu  |
| 11              | 0.182 ± 0.003 (4.62 ± 0.076) | 0.072 ± 0.002 (1.83 ± 0.051) | 110 Turns #47 AWG Cu |

### ELECTRICAL SPECIFICATIONS

Operating Temperature: -55°C to + 125°C

| Inductance (μH) | Operating Frequency Range | Insertion Loss | Return Loss | Rdc (Ω) @ 20°C, 10 mA current | IDC (mA), dc max. | Number of Turns | Cu Wire Size (AWG) |
|-----------------|---------------------------|----------------|-------------|-------------------------------|-------------------|-----------------|--------------------|
| 2               | 2.3 MHz to 40 GHz         | 0.5 dB typ.    | 17 dB typ.  | 1.45                          | 250               | 46              | 44                 |
| 6               | 880 KHz to 40 GHz         | 0.6 dB typ.    | 18 dB typ.  | 2.90                          | 200               | 80              | 44                 |
| 11              | 500 KHz to 40 GHz         | 0.4 dB typ.    | 18 dB typ.  | 7.00                          | 115               | 110             | 47                 |

# GL Series



## Ultra Broad Band Inductor

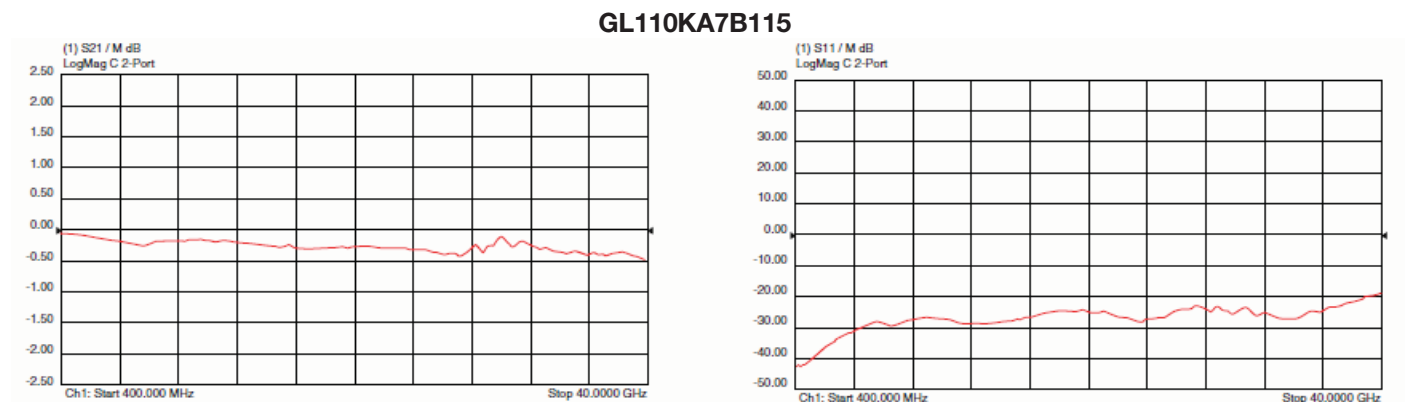
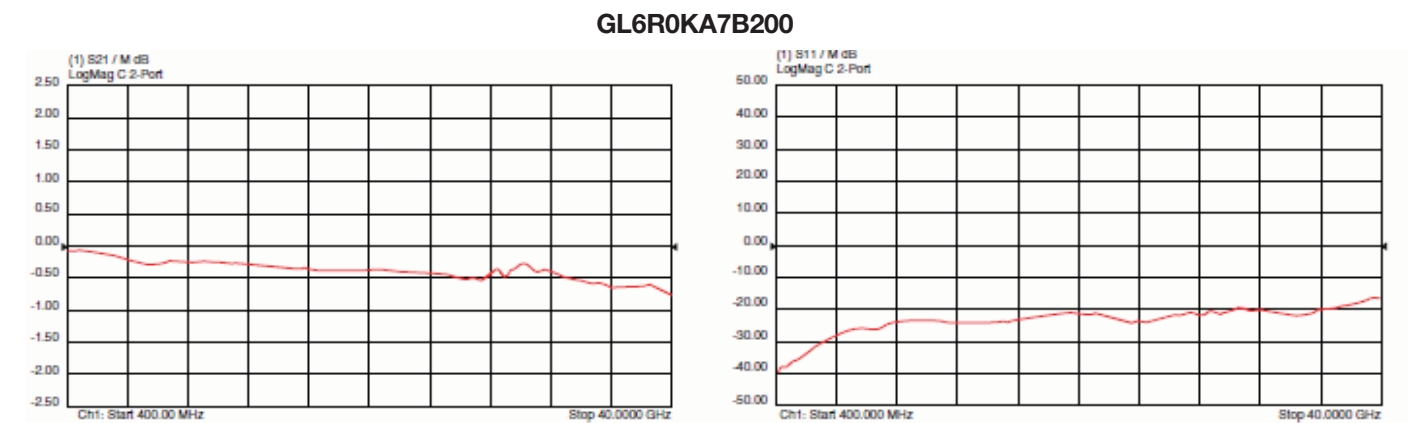
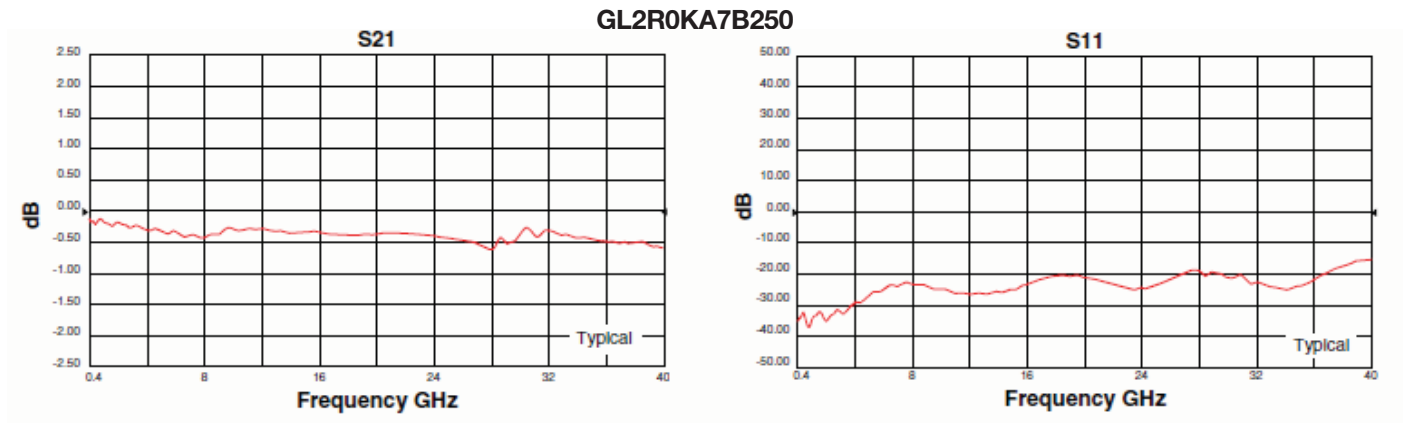
### HOW TO ORDER

|           |  |                             |              |   |  |
|-----------|--|-----------------------------|--------------|---|--|
| <b>GL</b> | <b>6R0</b>   | <b>K</b>                    | <b>A</b>     | <b>7</b>  | <b>B</b>                                   |
| Style     | Inductance<br>First 2 significant<br>digits for inductance | Tolerance<br>$K = \pm 10\%$ | Failure Rate | Termination<br>7 = 15-25 $\mu$ in.,<br>Gold Plate | Packaging<br>B = 1 piece in<br>plastic box |



### AVAILABLE PART NUMBERS

GL2R0KA7B250  
GL6R0KA7B200  
GL110KA7B115



### TEST PARAMETERS:

All testing performed on 10 mil thick Rogers RO4350 microstrip board, with the GL Leads connected between the microstrip trace and the underside ground plane (nominal 50 ohm characteristic impedance)

