



## 2.1.4 RLB254NF Return Loss Bridge, 5-3000 MHz

### Features:

- Coverage: 5-3000 MHz
- Excellent directivity: >40 dB 50-2600 MHz  
>35 dB 2600-3000 MHz
- Internal 50 ohm reference
- RF Reflected port
- Great for Antenna Work
- Use with Vector Analyzers
- Use with Spectrum Analyzers
- Rugged case and connectors
- Five watt power rating
- Covers Cell, 1.8 GHz PCS, 2.45 GHz ISM



### Applications

Return loss bridges are useful in measuring VSWR, or return loss of filters, mixers, antennas and amplifiers. With directivity ratings of better than 40 dB, EAGLE bridges yield excellent results. The bridges may also be used for coupling two generators for inter-modulation testing, or power splitting for leveling systems. All EAGLE bridges have a true RF output; they can be connected directly to vector or spectrum analyzers. Even spectrum analyzers contained in communications service monitors can be used. With the high degree of accuracy found in EAGLE bridges error correction is not absolutely necessary.

### Description

The RLB254NF return loss bridge has been designed for lasting service in either laboratory or field service applications. This bridge yields laboratory performance in directivity and open/short ratio over a frequency range of 5 to 3000 MHz. pro of measuring VSWR for VHF, UHF, Cellular, PCS and 2.45 GHz ISM. Each bridge is constructed in a machined aluminum case. Connectors are heavy duty with field replaceable center pins. Power rating is a maximum of five watts up to one minute or 1.5 watt continuous.

### Description-continued

These bridges have three ports: SOURCE, DUT(device under test) and REFLECTED. The REFLECTED port on all EAGLE bridges is an RF port. The bridge may be connected directly to a network or spectrum analyzer. There is no REFERENCE port as the bridge contains an internal 50 ohm reference.

To insure that high quality is maintained, each unit is thoroughly inspected, both mechanically and electrically. Critical components are 100% inspected and tested before assembly into the units. After pretest the bridges are aged at 100 C and then retested.

### Quality

To insure that high quality is maintained each unit is thoroughly inspected both mechanically and electrically. All units are aged and then retested to insure superior stability over the lifetime of the instruments.

### Availability

These units are normally stock items: 1 week delivery. Special orders or large quantities usually require 2-4 weeks.

### Specifications

Please refer to next page for detailed specifications.

**SPECIFICATIONS**

**Electrical**

Freq Range: 5-3000 MHz  
 Power Rating:  
 Continuous 1.5W  
 Intermittent<1 min on 5 off 5.0W

**CAUTION: Do NOT Apply DC to any port**

Insertion Loss:  
 SOURCE to LOAD <7.0 dB  
 LOAD to REFLECTED <7.5 dB  
 Port Match:  
 Source: >20 dB RL  
 DUT: >25 dB RL  
 Reflected: >10 dB RL  
 Directivity  
 5 to 50 MHz >25 dB RL  
 50 to 2600 MHz >40 dB RL  
 2.6 to 3.0 GHz >35 dB RL  
 Open/Short Ratio  
 .005 to 2.6 GHz <+1.5 dB/-2.0  
 2.6 to 3.0 GHz <+1.5 dB/-3.0

**Environmental**

Temperature:  
 Operating +10 to +40  
 Reduced Spec. -10 to +85  
 Storage: -55 to +125  
 Humidity (non-cond): 10-80% RH  
 Shock: Drop from 1"  
 Vibration: 100 G any Axis  
 Waterproof No

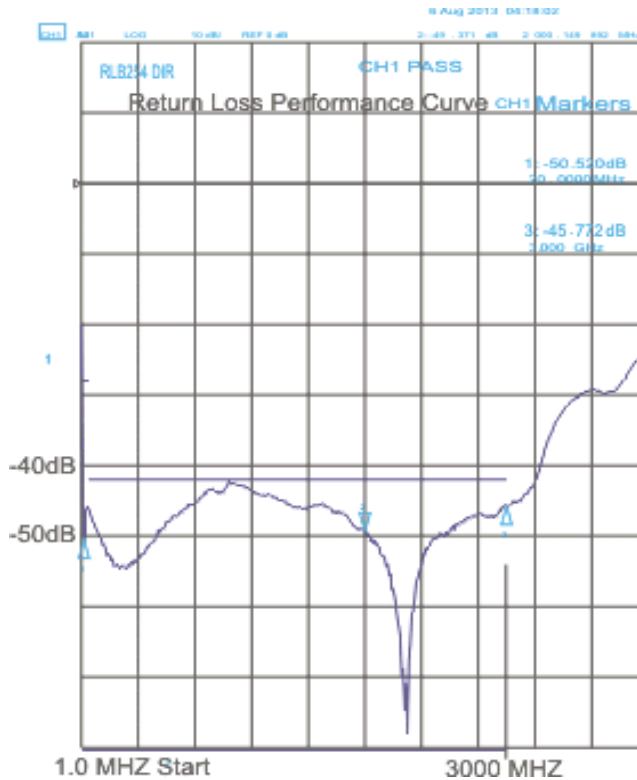
**Mechanical**

Case size: no connector  
 1.5"Wx7.0"Lx1.05"H  
 Weight: <12.0 Oz

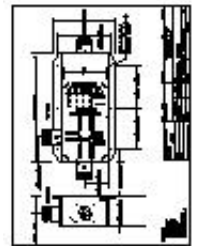
**Options**

Connectors: N Female "NF"  
 Test Data  
 Test Data Plot TD  
 Certificate of Performance COC

**Test Data Plot**



Click on drawing for enlarged view



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