

RLB150x4-Product Data Sheet



FEATURES:

- Coverage: 5 Mhz to 2000 MHz
- Five Watt Power Rating
- Covers Cellular, 1.8 GHz and PCS
- Directivity > 40 dB
- RF reflected port
- Internal 50 ohm Reference
- Use with Spectrum Analyzers
- Rugged case and connectors
- Antenna Measurements

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 intermodulation 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 RLB150X4 return loss bridge has been designed for lasting service in either laboratory or field service applications. Within its operational range, the bridge yields laboratory performance in directivity and open/short ratio. Covering a range of 5 to 2000 Mhz, this bridge will provide an excellent means of measuring VSWR for VHF, UHF, Cellular, and PCS.

These bridges have three ports SOURCE, LOAD 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. The reference (a precision 50 ohm load) is built into EAGLE bridges so this port is not required. This eliminates the problem of lost terminations.

Description-continued

To insure ruggedness this bridge is constructed in a brass case with nickel plating. The connectors are heavy-duty with a field replaceable center pin. This allows replacement should wear or damage degrade the performance of the return loss bridge.

Power rating is a maximum of five watts up to two minutes or one watt continuous.

Quality

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. All parameters are tested using the latest in advanced ATE. The unit is then subjected to shock, vibration and temperature extremes after which it is retested to insure compliance.

Directivity is measured twice with a different precision load. The bridge must meet or exceed the applicable specification with both loads.

Availability

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

Specifications & Ordering

Please see the next page for detailed specifications, performance graphs and ordering information.

SPECIFICATIONS

Electrical:

Insertion Loss:

<7.0 dB SOURCE TO LOAD port
<7.5 dB LOAD TO REFLECTED port

Power Rating:

1.5 Watt Continuous
5.0 Watt 1 min on 4 min off

CAUTION: Do NOT apply DC to any port

Port Match:

Source: >20 dB RL
DUT: >25 dB RL
Reflected: >10 dB RL

Directivity

5 to 50 Mhz >25 dB
50 to 2000 Mhz >40 dB

Open/Short Ratio

<±1.5 dB

Environmental:

Temperature:

10° to 50° C full specification
-10° to +85° C reduced specification
-55° to +125° C storage

Humidity:

10% to 80% RH, Non-cond

SPECIFICATIONS-Cont

Mechanical:

Case Size:

2.6"Wx4.5"Lx1.4"H

Weight:

<12 Oz

Options:

Connectors:

"N" N female Standard

"M" SMA female

Test:

"TD" test data plot

"COC" Cert of Conformance

Outline Drawing:

