

DC Pass

Matching Transformer

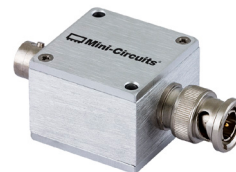
Z7550-BMBF+

50/75Ω

DC to 3000 MHz

The Big Deal

- Low Insertion loss 0.6 dB typ.
- 2W Power Handling
- BNC-F (50Ω) to BNC-M (75Ω) Connectors



Generic photo used for illustration purposes only

CASE STYLE: QP1876-1

Product Overview

Mini-Circuits' Z7550-BMBF+ is a coaxial 50/75Ω matching transformer covering the DC to 3000 MHz frequency range, supporting impedance matching in a wide range of systems including CATV, broadband networks, matching antenna systems and more. This model is ideal for 50/75Ω impedance matching in systems where minimizing overall signal loss is a priority. The transformer handles RF input power up to 2W and comes housed in a rugged, compact aluminum alloy case (1.25 x 1.25 x 0.94") with BNC-F (50Ω) to BNC-M (75Ω) connectors.

Key Features

| Feature | Advantages |
|---|---|
| Wideband, DC to 3000 MHz | Supports a wide variety of applications including CATV and DOCSIS® 3.1 systems and equipment. |
| Low insertion loss, 0.6 dB typ. | Enables excellent signal power transmission from input to output, minimizing overall system losses. |
| 2W Power handling | Supports a range of system power requirements. |
| Compact size, 1.25 x 1.25 x 0.94" | Accommodates tight space requirements for crowded system layouts. |
| Connectorized package BNC-F (50Ω) to BNC-M (75Ω) connectors | Supports connections between components with different connector types. |

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



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Z7550-BMBF+



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Connectors Model
75Ω BNC-M Z7550-BMBF+
50Ω BNC-F

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Maximum Ratings

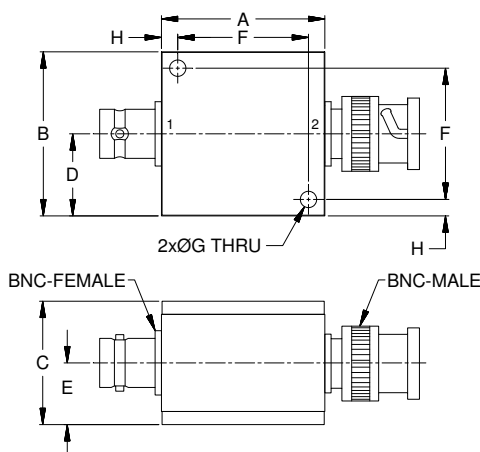
| | |
|-----------------------|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| DC Current | 5A max. |
| DC Resistance | 0.2Ω max. |

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections

| | |
|----------|-----------------|
| PORT - 1 | BNC-Male(75Ω) |
| PORT - 2 | BNC-Female(50Ω) |

Outline Drawing

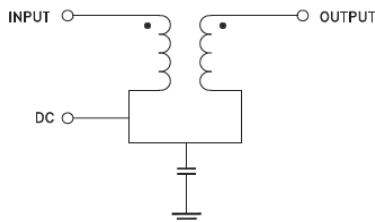


Outline Dimensions (inch mm)

| A | B | C | D | E | F | G | H | Wt. |
|-------|-------|-------|-------|-------|-------|------|------|-------|
| 1.25 | 1.25 | .94 | .63 | .47 | 1.00 | .13 | .13 | grams |
| 31.75 | 31.75 | 23.88 | 16.00 | 11.94 | 25.40 | 3.30 | 3.30 | 51 |

Note: Please refer to case style drawing for details

Functional Schematic



Features

- Low loss (0.6 dB typ.) matching device
- Wide band coverage, DC-3000 MHz
- Connectorized package

Applications

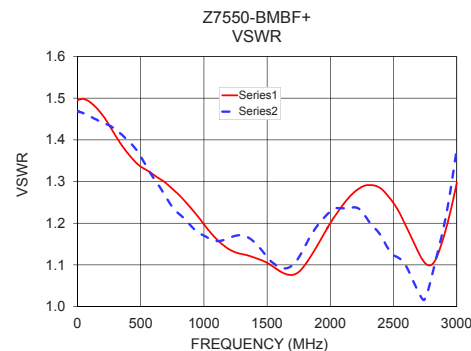
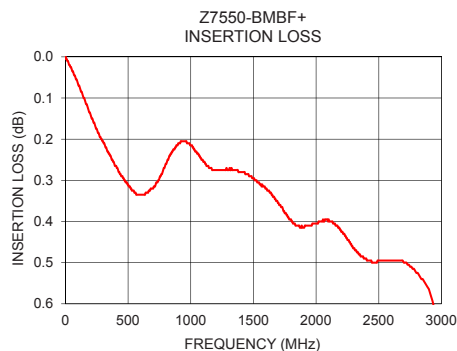
- Impedance matching
- CATV
- Matching antenna systems

Electrical Specifications at 25°C

| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|-----------------|-----------------|------|------|------|------|
| Frequency Range | - | DC | - | 3000 | MHz |
| Insertion Loss | 10 | - | - | 0.5 | dB |
| | 950 - 2500 | - | 0.5 | 1.0 | |
| | 2500 - 3000 | - | 1.2 | - | |
| VSWR | 10 | - | - | 1.8 | :1 |
| | 950 - 2500 | - | - | 1.6 | |
| | 2500 - 3000 | - | 1.6 | - | |
| Power | DC - 3000 | - | - | 2 | W |

Typical Performance Data

| Frequency (MHz) | Insertion Loss (dB) | VSWR | |
|-----------------|---------------------|------|------|
| | | 50 Ω | 75 Ω |
| 10 | 0.01 | 1.50 | 1.47 |
| 100 | 0.07 | 1.49 | 1.46 |
| 250 | 0.18 | 1.44 | 1.44 |
| 500 | 0.31 | 1.34 | 1.36 |
| 950 | 0.21 | 1.22 | 1.18 |
| 1500 | 0.30 | 1.10 | 1.12 |
| 1750 | 0.38 | 1.08 | 1.12 |
| 2300 | 0.47 | 1.29 | 1.21 |
| 2500 | 0.50 | 1.25 | 1.12 |
| 3000 | 0.71 | 1.30 | 1.38 |



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