## The Big Deal

- Low Insertion loss 0.5 dB
- 1W Power Handling

- N-F (50 ) to BNC-F (75 ) Connectors


## Product Overview

Mini-Circuits' Z7550-BFNF+ is a coaxial 50/75 $\Omega$ matching transformer covering the DC to 2500 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 $50 / 75 \Omega$ impedance matching in systems where minimizing overall signal loss is a priority. The transformer handles RF input power up to 1 W and comes housed in a rugged, compact aluminum alloy case ( $1.25 \times 1.25 \times 0.75$ ") with N-F $(50 \Omega)$ to BNC-F (75 $)$ connectors.

Key Features

| Feature |  |
| :--- | :--- |
| Wideband, DC to 2500 MHz | Supports a wide variety of applications including CATV and DOCSIS® 3.1 systems and equipment. |
| Low insertion loss, 0.5 dB | Enables excellent signal power transmission from input to output, minimizing overall system losses. |
| 1W Power handling | Supports a range of system power requirements. |
| Compact size, $1.25 \times 1.25 \times 0.75^{\prime \prime}$ | Accommodates tight space requirements for crowded system layouts. |
| Connectorized package $\mathrm{N}-\mathrm{F}(50 \Omega)$ <br> to BNC-F $(75 \Omega)$ connectors | Supports connections between components with different connector types. |

[^0]Matching Transformer
50/75 $\Omega$
DC to 2500 MHz

## Maximum Ratings

| Operating Temperature | $-40^{\circ} \mathrm{C}$ to $85^{\circ} \mathrm{C}$ |
| :--- | ---: |
| Storage Temperature | $-55^{\circ} \mathrm{C}$ to $100^{\circ} \mathrm{C}$ |
| DC Current | $5 \mathrm{~A} \mathrm{max}$. |
| DC Resistance | $0.2 \Omega$ max. |
| Permanent damage may occur if any of these limits are exceeded |  |

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## Coaxial Connections

Input
N -Female
Output BNC-Female


Outline Dimensions ( $\left.\begin{array}{c}\text { inch } \\ \mathrm{mm}\end{array}\right)$

| A | B | C | D | E | F |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 1.25 | 1.25 | 0.94 | 1.00 | 0.125 | 1.125 |
| 31.75 | 31.75 | 23.88 | 25.4 | 3.18 | 28.58 |
| G | H | J |  |  | $\mathrm{Wt}$. |
| 0.63 | 0.125 | 0.47 |  |  | grams |
| 16.00 | 3.18 | 11.94 |  |  | 60 |

Functional Schematic

Config. Q
IN


Functional Schematic

Features

- Low loss ( 0.5 dB ) matching device
- Wideband coverage, DC-2500MHz
- Connectorized package


## Applications

- Impedance matching
- CATV
- Matching antenna systems

Electrical Specifications at $25^{\circ} \mathrm{C}$

| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Unit |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Frequency Range | - | DC | - | 2500 | MHz |
| Insertion Loss | 10 | - | - | 0.3 |  |
|  | $950-2500$ | - | 0.4 | 1.2 | dB |
| Power | 10 | - | - | 1.8 | $: 1$ |

Typical Performance Data

| Frequency <br> (MHz) | Insertion Loss <br> (dB) | VSWR |  |
| :---: | :---: | :---: | :---: |
|  |  | $\mathbf{5 0 \Omega}$ | $\mathbf{7 5 \Omega}$ |
| 10 | 0.01 | 1.51 |  |
| 50 | 0.03 | 1.51 | 1.46 |
| 100 | 0.07 | 1.50 | 1.45 |
| 250 | 0.19 | 1.47 | 1.42 |
| 300 | 0.23 | 1.45 | 1.42 |
| 950 | 0.21 | 1.22 | 1.24 |
| 1500 | 0.30 | 1.22 | 1.27 |
| 2150 | 0.43 | 1.31 | 1.21 |
| 2300 | 0.41 | 1.27 | 1.12 |
| 2500 | 0.44 | 1.07 |  |





CASE STYLE: H795-14
Connectors Model
75 $\Omega$ BNC-F Z7550-BFNF+ $50 \Omega$ N-F

## +RoHS Compliant

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

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.
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