

Coaxial

# Fixed Attenuator

75Ω 0.5W 15dB DC to 2000 MHz

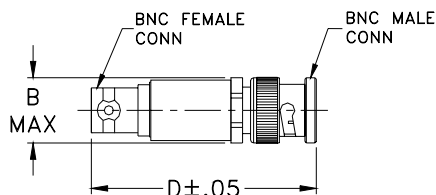
## Maximum Ratings

Operating Temperature -45°C to 100°C

Storage Temperature -55°C to 100°C

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

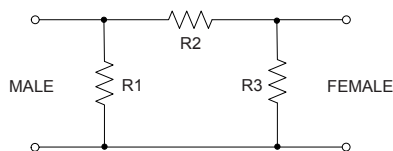
## Outline Drawing



## Outline Dimensions (inch/mm)

| B     | D     | wt    |
|-------|-------|-------|
| .62   | 1.94  | grams |
| 15.75 | 49.28 | 30.0  |

## Electrical Schematic



## Features

- excellent VSWR, 1.04:1 typ.
- excellent flatness, 0.05 dB typ. to 2000 MHz
- usable to 4000 MHz
- rugged unibody construction

## Applications

- cable tv
- instrumentation
- DS3 signal

# HAT-15-75+



Generic photo used for illustration purposes only

CASE STYLE: FF747

Connectors Model  
BNC Male-BNC Female HAT-15-75+

## +RoHS Compliant

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

## Electrical Specifications

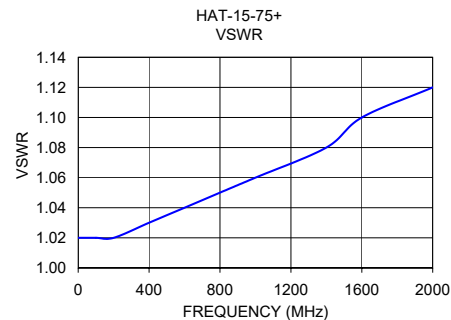
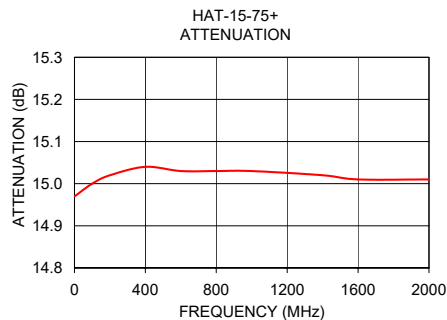
| FREQ.<br>RANGE<br>(MHz)        | ATTENUATION<br>(dB)<br>Flatness* |      |      |  |             |      |             |      | VSWR<br>(:1)  |      |             |      |             |      | MAX.<br>INPUT<br>POWER†<br>(W) |     |
|--------------------------------|----------------------------------|------|------|--|-------------|------|-------------|------|---------------|------|-------------|------|-------------|------|--------------------------------|-----|
|                                | DC-0.5<br>GHz                    |      |      |  | DC-1<br>GHz |      | DC-2<br>GHz |      | DC-0.5<br>GHz |      | DC-1<br>GHz |      | DC-2<br>GHz |      |                                |     |
|                                | Nom.                             | Typ. | Max. |  | Typ.        | Max. | Typ.        | Max. | Typ.          | Max. | Typ.        | Max. | Typ.        | Max. |                                |     |
| f <sub>L</sub> -f <sub>U</sub> |                                  |      |      |  |             |      |             |      |               |      |             |      |             |      |                                |     |
| DC-2000                        | 15±0.2                           | 0.05 | 0.15 |  | 0.05        | 0.15 |             | 0.05 | 0.15          | 1.03 | 1.2         | 1.04 | 1.2         | 1.1  | 1.3                            | 0.5 |

\* Flatness = variation over band divided by 2.

† 0.5 Watt at 70°C ambient, derate linearly .015W/°C above 70°C

## Typical Performance Data

| Frequency (MHz) | Attenuation (dB) | VSWR (:1) |
|-----------------|------------------|-----------|
| 1.00            | 14.97            | 1.02      |
| 100.00          | 15.00            | 1.02      |
| 200.00          | 15.02            | 1.02      |
| 400.00          | 15.04            | 1.03      |
| 600.00          | 15.03            | 1.04      |
| 800.00          | 15.03            | 1.05      |
| 1000.00         | 15.03            | 1.06      |
| 1400.00         | 15.02            | 1.08      |
| 1600.00         | 15.01            | 1.10      |
| 2000.00         | 15.01            | 1.12      |



## 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](http://www.minicircuits.com/MCLStore/terms.jsp)

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REV. H  
M151107  
ED-9273/8  
HAT-15-75+  
RVN/LC/CP/AM  
200520

## Typical Performance Data

| FREQUENCY<br>(MHz) | ATTENUATION<br>(dB) | RETURN LOSS<br>(dB) |
|--------------------|---------------------|---------------------|
| 1.00               | 14.97               | 40.09               |
| 100.00             | 15.00               | 40.09               |
| 200.00             | 15.02               | 40.09               |
| 400.00             | 15.04               | 36.61               |
| 600.00             | 15.03               | 34.15               |
| 800.00             | 15.03               | 32.26               |
| 1000.00            | 15.03               | 30.71               |
| 1400.00            | 15.02               | 28.30               |
| 1600.00            | 15.01               | 26.44               |
| 2000.00            | 15.01               | 24.94               |

REV. X1  
HAT-15-75+  
061108  
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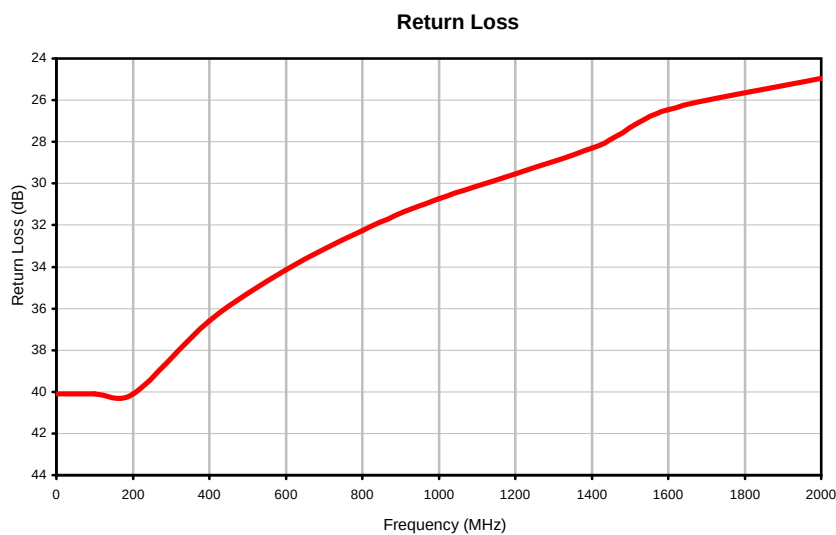
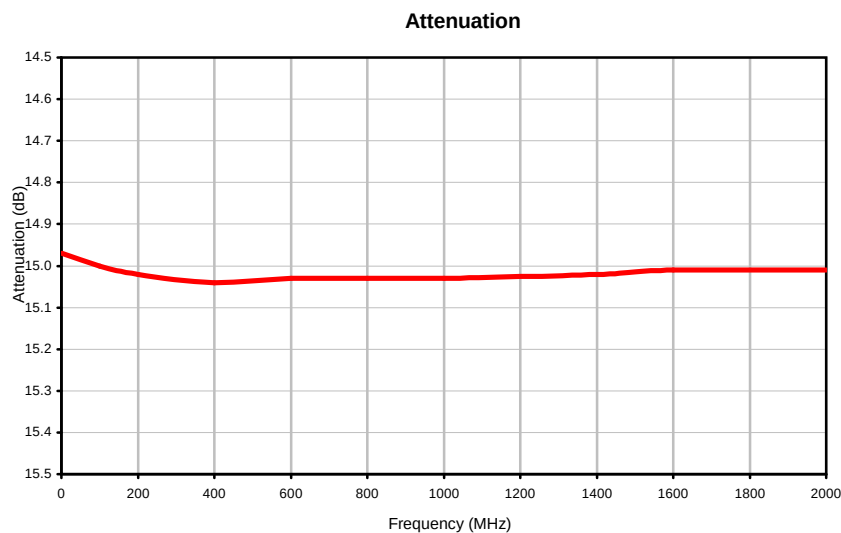
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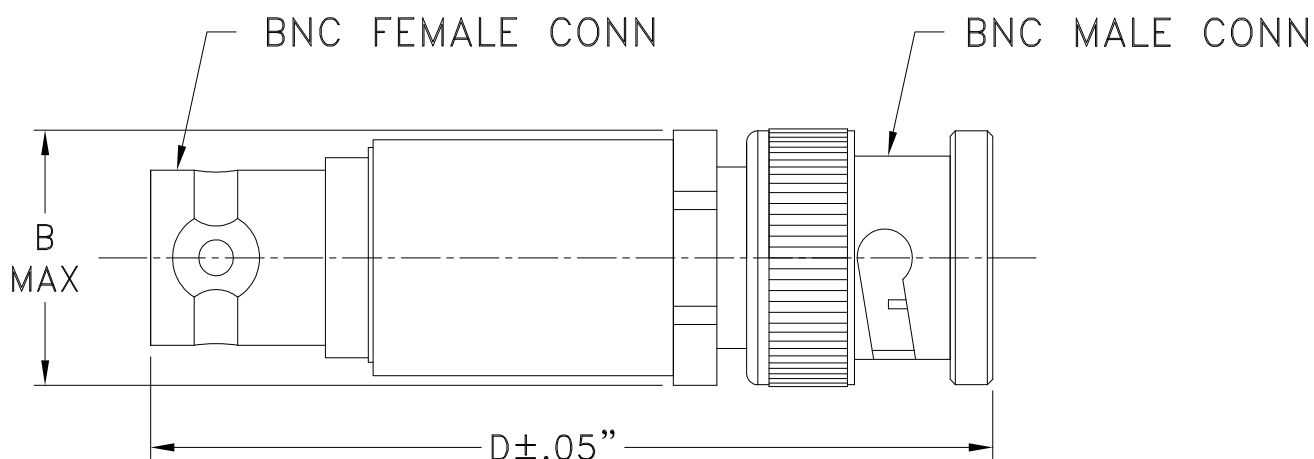
## Typical Performance Curves



# Case Style

# FF

## Outline Dimensions

**FF747**

| CASE #. | A  | B              | C  | D               | E  | WT GRAMS |
|---------|----|----------------|----|-----------------|----|----------|
| FF747   | -- | .62<br>(15.75) | -- | 1.94<br>(49.28) | -- | 30.0     |

Dimensions are in inches (mm). Tolerances: 2Pl. ±.04; 3Pl. ±.030

### Notes:

1. Case material: Brass.
2. Case finish: Nickel plate.



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



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RF/IF MICROWAVE COMPONENTS



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification              | Test/Inspection Condition                                                              | Reference/Spec                       |
|----------------------------|----------------------------------------------------------------------------------------|--------------------------------------|
| Operating Temperature      | -45° to 100° C<br>Ambient Environment                                                  | Individual Model Data Sheet          |
| Storage Temperature        | -55° to 100° C<br>Ambient Environment                                                  | Individual Model Data Sheet          |
| Barometric Pressure        | 100,000 Feet                                                                           | MIL-STD-202, Method 105, Condition D |
| Humidity                   | 90% RH, 65°C<br>Units may require bake-out after humidity to restore full performance. | MIL-STD-202, Method 103              |
| Thermal Shock              | -65° to 125°C, 5 cycles                                                                | MIL-STD-202, Method 107, Condition B |
| Vibration (High Frequency) | 20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)    | MIL-STD-202, Method 204, Condition D |
| Mechanical Shock           | 100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)                          | MIL-STD-202, Method 213, Condition I |