

Coaxial Fixed Attenuator

HAT-3-75+ HAT-3-75

75Ω 0.5W 3dB DC to 2000 MHz



Generic photo used for illustration purposes only

CASE STYLE: FF747

Connectors Model
BNC Male-BNC Female HAT-3-75(+)

+RoHS Compliant

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

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.

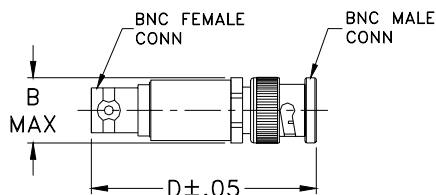
Features

- excellent VSWR, 1.15:1 typ.
- excellent flatness, 0.15 dB typ. to 2000 MHz
- usable to 4000 MHz
- rugged unibody construction

Applications

- cable tv
- instrumentation
- DS3 signal

Outline Drawing



Outline Dimensions (inch/mm)

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

Electrical Specifications

| FREQ. RANGE (MHz) | ATTENUATION (dB) | | | | | | VSWR (:1) | | | | MAX. INPUT POWER† (W) | | | |
|-------------------|------------------|------|----------|------|----------|------|------------|------|----------|------|-----------------------|----------|------|-----|
| | Flatness* | | | | | | | | | | | | | |
| | DC-0.5 GHz | | DC-1 GHz | | DC-2 GHz | | DC-0.5 GHz | | DC-1 GHz | | | DC-2 GHz | | |
| f_L-f_U | Nom. | Typ. | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. | Typ. | Max. | |
| DC-2000 | 3±0.2 | 0.05 | 0.15 | 0.10 | 0.20 | 0.15 | 0.30 | 1.05 | 1.2 | 1.15 | 1.25 | 1.22 | 1.35 | 0.5 |

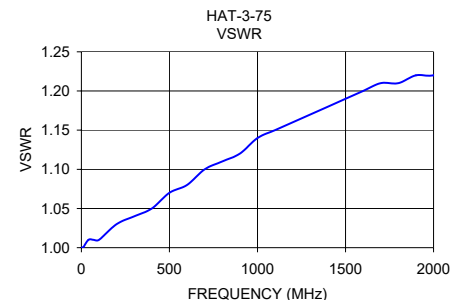
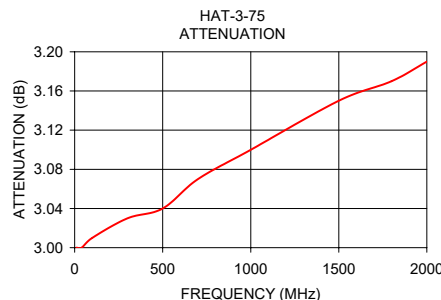
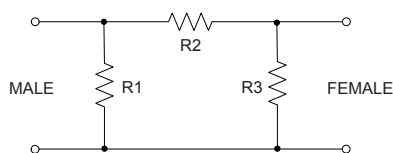
* Flatness = variation over band divided by 2.

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

Typical Performance Data

| Frequency (MHz) | Attenuation (dB) | VSWR (:1) |
|-----------------|------------------|-----------|
| 10.00 | 3.00 | 1.00 |
| 40.00 | 3.00 | 1.01 |
| 100.00 | 3.01 | 1.01 |
| 300.00 | 3.03 | 1.04 |
| 500.00 | 3.04 | 1.07 |
| 700.00 | 3.07 | 1.10 |
| 1000.00 | 3.10 | 1.14 |
| 1500.00 | 3.15 | 1.19 |
| 1800.00 | 3.17 | 1.21 |
| 2000.00 | 3.19 | 1.22 |

Electrical Schematic



Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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



Fixed Attenuator

HAT-3-75+

Typical Performance Data

| FREQUENCY (MHz) | ATTENUATION (dB) | RETURN LOSS (dB) |
|--------------------|---------------------|---------------------|
| 10.00 | 3.00 | 46.06 |
| 40.00 | 3.00 | 46.06 |
| 100.00 | 3.01 | 46.06 |
| 300.00 | 3.03 | 34.15 |
| 500.00 | 3.04 | 29.42 |
| 700.00 | 3.07 | 26.44 |
| 1000.00 | 3.10 | 23.69 |
| 1500.00 | 3.15 | 21.23 |
| 1800.00 | 3.17 | 20.44 |
| 2000.00 | 3.19 | 20.08 |

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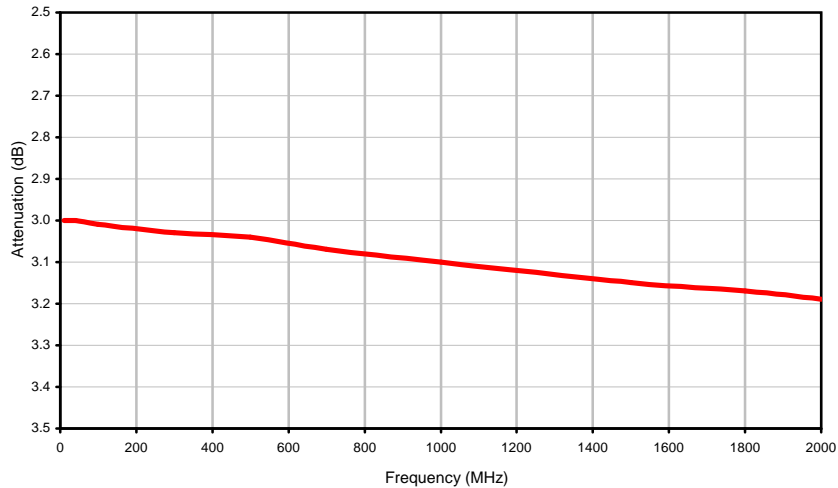


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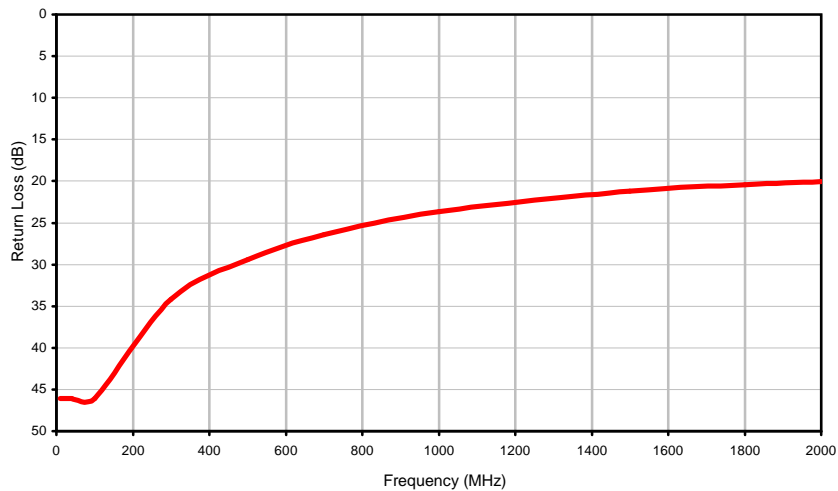


Typical Performance Curves

Attenuation



Return Loss

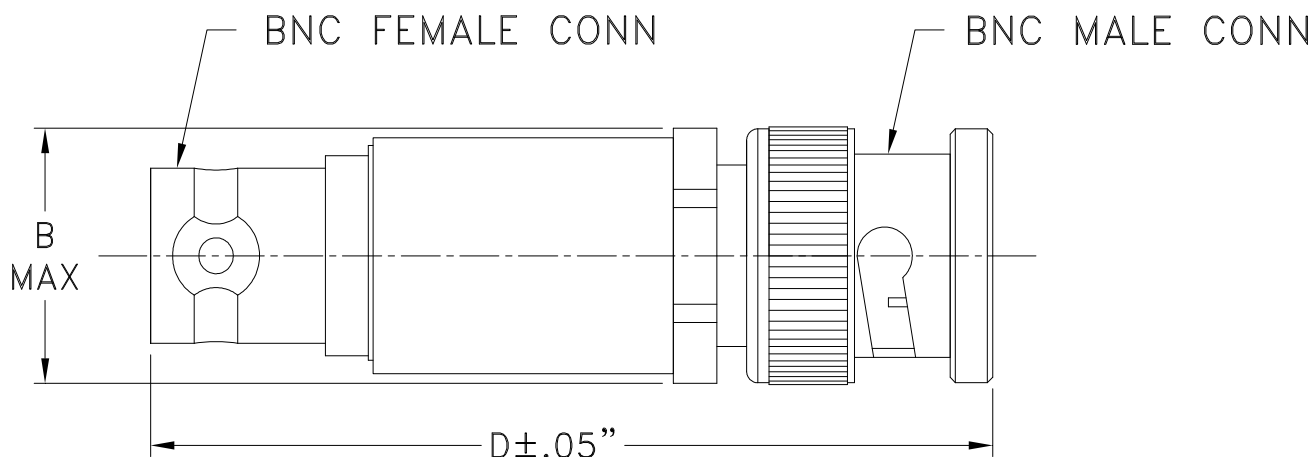


Case Style

FF

Outline Dimensions

FF747



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

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

Notes:

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

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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 Ambient Environment | Individual Model Data Sheet |
| Storage Temperature | -55° to 100° C Ambient Environment | Individual Model Data Sheet |
| Barometric Pressure | 100,000 Feet | MIL-STD-202, Method 105, Condition D |
| Humidity | 90% RH, 65°C 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 |