



COAXIAL

DC Block

BLK-18W-S+

50Ω 0.01 to 18 GHz SMA Female to SMA Male

FEATURES

- Broadband performance
- Low Insertion loss
- Rugged unibody construction
- Off-the-shelf availability



Generic photo used for illustration purposes only

APPLICATIONS

- Test and Measurement Instrumentation
- Communication Systems
- Defense Systems

| | |
|------------|-------------|
| Model No. | BLK-18W-S+ |
| Case Style | DJ2668 |
| Connectors | SMA F-SMA M |

+RoHS Compliant
 The +Suffix identifies RoHS Compliance.
 See our website for methodologies and qualifications

ELECTRICAL SPECIFICATIONS AT 25°C

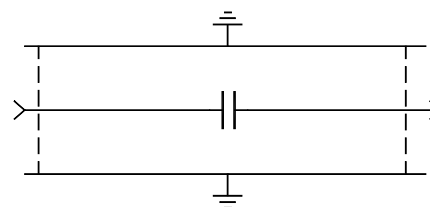
| Parameter | Frequency (GHz) | Min. | Typ. | Max. | Units |
|-----------------|-----------------|------|------|------|-------|
| Frequency Range | | 0.01 | | 18 | GHz |
| Insertion Loss | 0.01-18 | — | 0.41 | 0.75 | dB |
| Return Loss | 0.01-18 | 16.5 | 23 | — | dB |

ABSOLUTE MAXIMUM RATINGS

| Parameter | Ratings |
|----------------------------|-------------------|
| Operating Case Temperature | -55 °C to +125 °C |
| Storage Temperature | -55 °C to +125 °C |
| DC Input Voltage | 200 V |
| Input Power | 33 dBm |

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

ELECTRICAL SCHEMATIC





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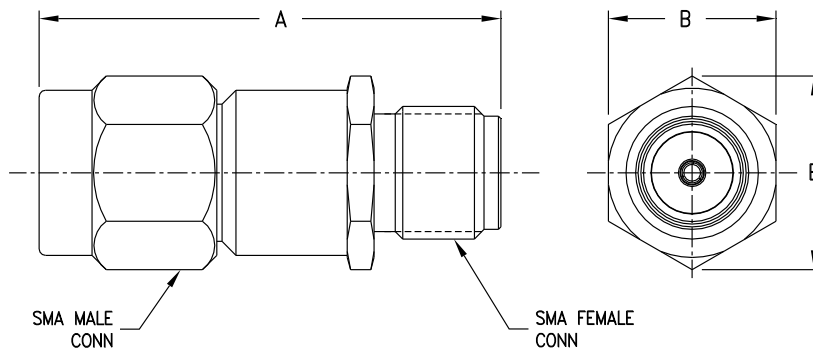
Mini-Circuits

50Ω 0.01 to 18 GHz SMA Female to SMA Male

COAXIAL CONNECTIONS

| | |
|--------|--------------|
| Port 1 | SMA - Female |
| Port 2 | SMA -Male |

OUTLINE DRAWING



OUTLINE DIMENSIONS (Inches) mm

| | A | B | E | Weight Grams |
|--------|-------|------|------|-----------------|
| inches | 0.86 | 0.31 | .36 | |
| mm | 21.84 | 8.00 | 9.14 | 5.0 |



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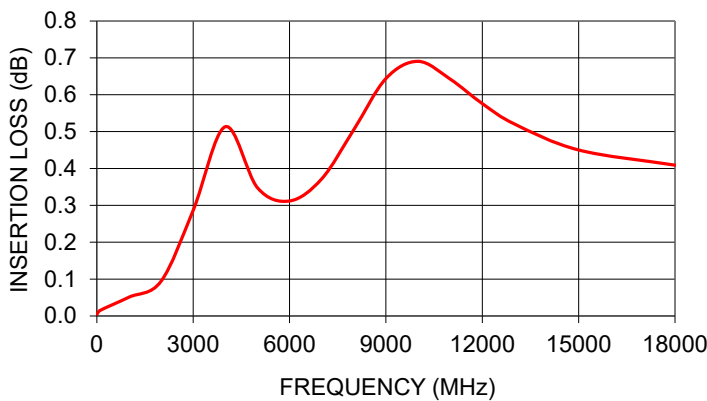
Mini-Circuits

50Ω 0.01 to 18 GHz SMA Female to SMA Male

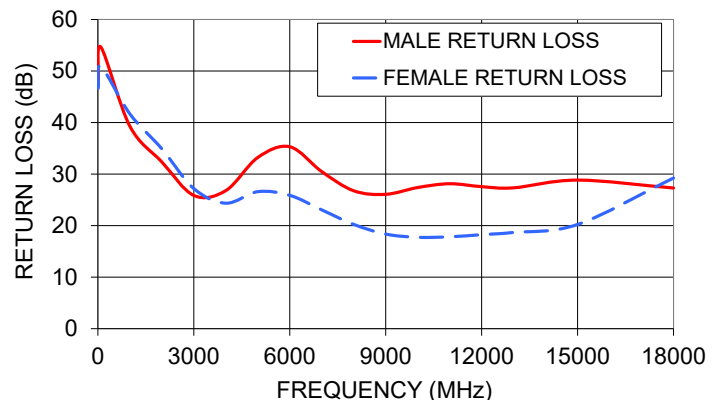
TYPICAL PERFORMANCE DATA AND CHARTS

| Frequency (MHz) | Insertion Loss (dB) | Return Loss (dB) | |
|-----------------|---------------------|------------------|-------|
| | | Female | Male |
| 10 | 0.01 | 46.63 | 47.86 |
| 100 | 0.02 | 50.87 | 54.57 |
| 1000 | 0.05 | 41.67 | 39.28 |
| 2000 | 0.09 | 34.90 | 32.35 |
| 3000 | 0.29 | 27.18 | 25.85 |
| 4000 | 0.51 | 24.34 | 26.78 |
| 5000 | 0.35 | 26.58 | 33.21 |
| 6000 | 0.31 | 25.87 | 35.30 |
| 7000 | 0.37 | 23.05 | 30.47 |
| 8000 | 0.51 | 20.23 | 26.75 |
| 9000 | 0.64 | 18.35 | 26.06 |
| 10000 | 0.69 | 17.73 | 27.39 |
| 11000 | 0.64 | 17.82 | 28.12 |
| 12000 | 0.58 | 18.24 | 27.55 |
| 13000 | 0.52 | 18.67 | 27.32 |
| 15000 | 0.45 | 20.22 | 28.82 |
| 18000 | 0.41 | 29.24 | 27.29 |

BLK-18W-S+
INSERTION LOSS



BLK-18W-S+
RETURN LOSS



NOTES

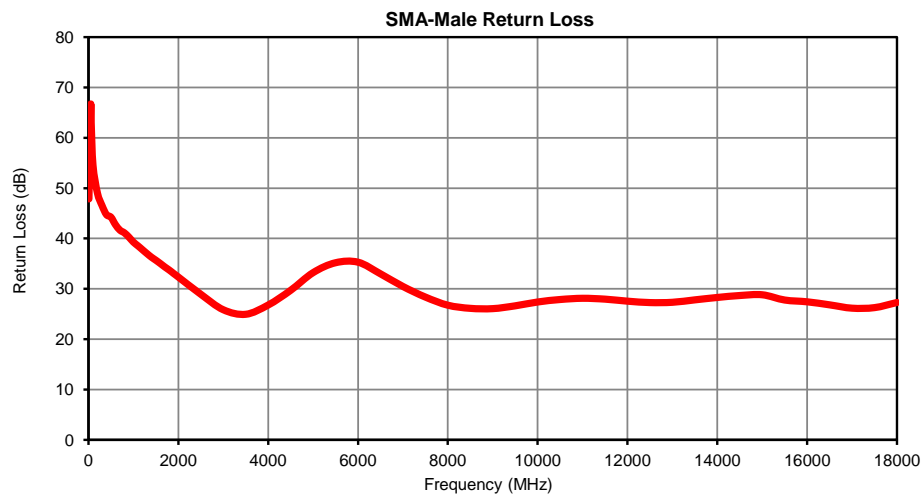
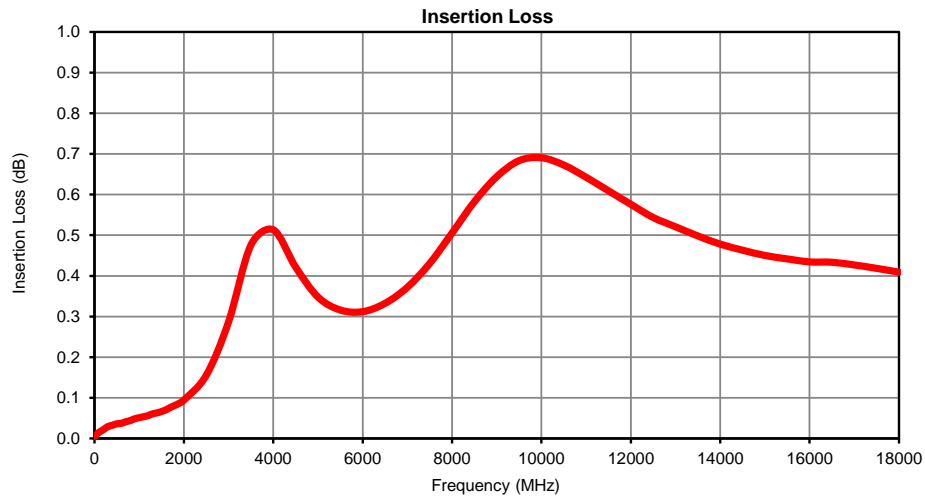
- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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/terms/viewterm.html



Typical Performance Data

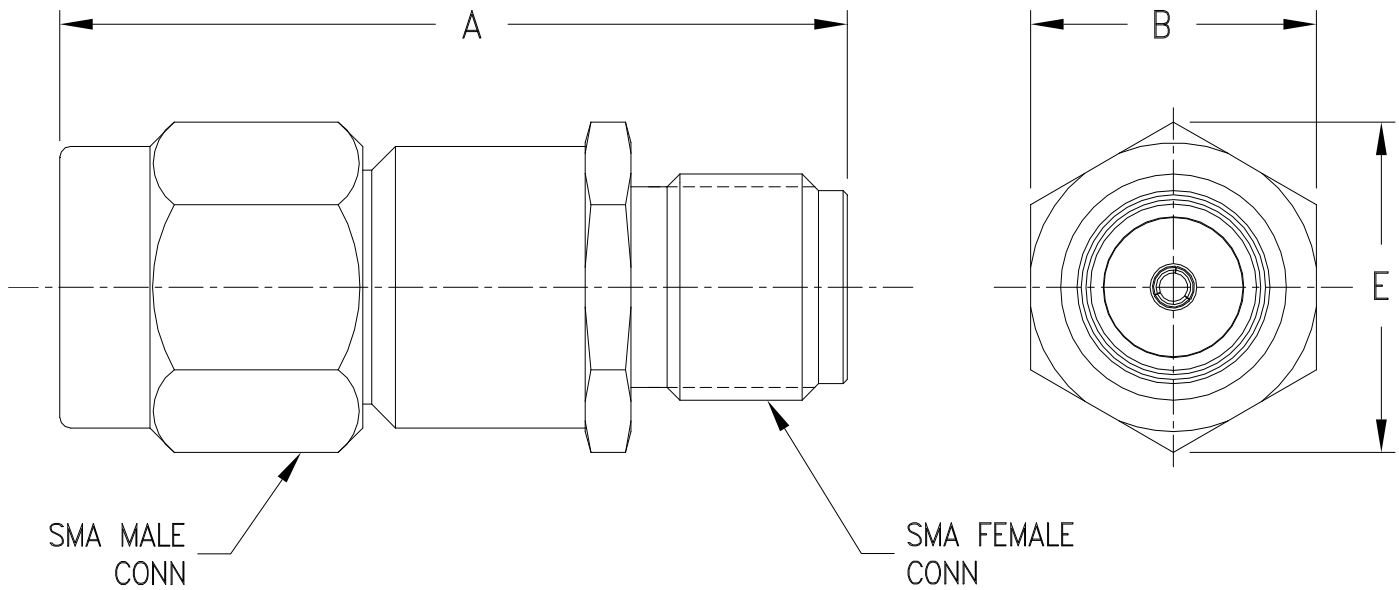
| FREQUENCY (MHz) | INSERTION LOSS (dB) | SMA-FEMALE Return Loss (dB) | SMA-MALE Return Loss (dB) |
|--------------------|------------------------|-----------------------------------|---------------------------------|
| 10 | 0.01 | 46.63 | 47.86 |
| 50 | 0.01 | 56.48 | 66.28 |
| 60 | 0.01 | 55.76 | 63.01 |
| 100 | 0.02 | 50.87 | 54.57 |
| 200 | 0.02 | 48.24 | 49.00 |
| 300 | 0.03 | 47.21 | 46.56 |
| 400 | 0.03 | 46.10 | 44.74 |
| 500 | 0.04 | 44.98 | 44.23 |
| 600 | 0.04 | 44.22 | 42.75 |
| 700 | 0.04 | 43.04 | 41.66 |
| 800 | 0.04 | 42.17 | 41.11 |
| 900 | 0.05 | 41.79 | 40.27 |
| 1000 | 0.05 | 41.67 | 39.28 |
| 1100 | 0.05 | 41.04 | 38.55 |
| 1200 | 0.06 | 40.45 | 37.78 |
| 1300 | 0.06 | 39.74 | 37.02 |
| 1400 | 0.06 | 39.14 | 36.29 |
| 1500 | 0.07 | 38.45 | 35.68 |
| 1600 | 0.07 | 37.74 | 35.02 |
| 1700 | 0.08 | 37.15 | 34.34 |
| 1800 | 0.08 | 36.39 | 33.72 |
| 1900 | 0.09 | 35.66 | 33.02 |
| 2000 | 0.09 | 34.90 | 32.35 |
| 2500 | 0.16 | 30.97 | 28.93 |
| 3000 | 0.29 | 27.18 | 25.85 |
| 3500 | 0.48 | 24.62 | 24.94 |
| 4000 | 0.51 | 24.34 | 26.78 |
| 4500 | 0.42 | 25.56 | 29.70 |
| 5000 | 0.35 | 26.58 | 33.21 |
| 5500 | 0.32 | 26.76 | 35.18 |
| 6000 | 0.31 | 25.87 | 35.30 |
| 6500 | 0.33 | 24.52 | 32.99 |
| 7000 | 0.37 | 23.05 | 30.47 |
| 7500 | 0.43 | 21.61 | 28.36 |
| 8000 | 0.51 | 20.23 | 26.75 |
| 8500 | 0.58 | 19.14 | 26.12 |
| 9000 | 0.64 | 18.35 | 26.06 |
| 9500 | 0.68 | 17.89 | 26.62 |
| 10000 | 0.69 | 17.73 | 27.39 |
| 10500 | 0.67 | 17.69 | 27.88 |
| 11000 | 0.64 | 17.82 | 28.12 |
| 11500 | 0.61 | 18.01 | 27.95 |
| 12000 | 0.58 | 18.24 | 27.55 |
| 12500 | 0.54 | 18.45 | 27.27 |
| 13000 | 0.52 | 18.67 | 27.32 |
| 13500 | 0.50 | 18.91 | 27.81 |
| 14000 | 0.48 | 19.21 | 28.28 |
| 14500 | 0.46 | 19.56 | 28.67 |
| 15000 | 0.45 | 20.22 | 28.82 |
| 15500 | 0.44 | 21.03 | 27.78 |
| 16000 | 0.43 | 22.00 | 27.42 |
| 16500 | 0.43 | 23.47 | 26.82 |
| 17000 | 0.43 | 25.13 | 26.16 |
| 17500 | 0.42 | 27.02 | 26.27 |
| 18000 | 0.41 | 29.24 | 27.29 |

Typical Performance Curves



Outline Dimensions

DJ2668



| CASE# | A | B | C | D | E | WT. GRAMS |
|--------|----------------|----------------|---|---|---------------|-----------|
| DJ2668 | .86 (21.84) | .312 (8.00) | - | - | .36 (9.14) | 5.0 |

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .03$; 3 Pl. $\pm .015$

Notes:

1. Case material: Stainless steel.
2. Finish: Passivation.



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 | -55° to 100° C Ambient Environment | Individual Model Data Sheet |
| Storage Temperature | -55° to 100° C Ambient Environment | Individual Model Data Sheet |
| Thermal Shock | -65° to 125°C, 5 cycles | MIL-STD-202, Method 107, Condition B |
| Connector Durability | 500 Mating / Unmating Cycles | MIL-PRF-390 / 2E, Paragraph 4, 6, 12 |