COAXIAL

DC Block

BLK-18-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

Model No.	BLK-18-S+
Case Style	FF888
Connectors	SMA F-SMA M

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

APPLICATIONS

- Test and Measurement Instrumentation
- Communication Systems
- Defense Systems

ELECTRICAL SPECIFICATIONS AT 25°C

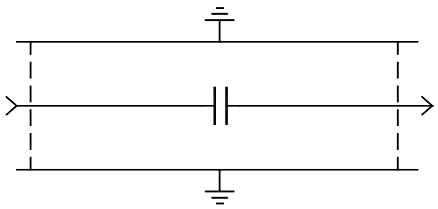
Parameter	Frequency (GHz)	Min.	Typ.	Max.	Units
Frequency Range		0.01		18	GHz
Insertion Loss	0.01-0.1	—	0.02	0.2	dB
	0.1-1.0	—	0.07	0.3	
	1.0-4.0	—	0.15	0.65	
	4.0-8.0	—	0.38	1.0	
	8.0-18	—	1.00	—	
Return Loss	0.01-0.1	20	26	—	dB
	0.1-1.0	20	36	—	
	1.0-4.0	20	24	—	
	4.0-8.0	15	18	—	
	8.0-18	—	12	—	

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Case Temperature	-55 °C to +100 °C
Storage Temperature	-55 °C to +100 °C
DC Input Voltage	50 V
Input Power	36 dBm

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

ELECTRICAL SCHEMATIC



DC Block

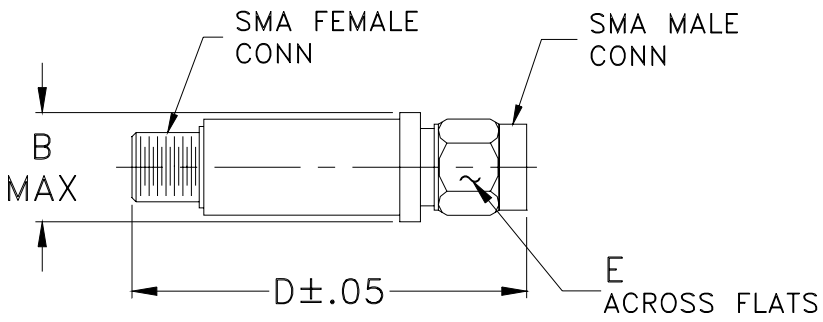
BLK-18-S+

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)

	B	D	E	Weight Grams
inches	.410	1.18	.312	
mm	10.41	29.97	7.92	7.0

COAXIAL

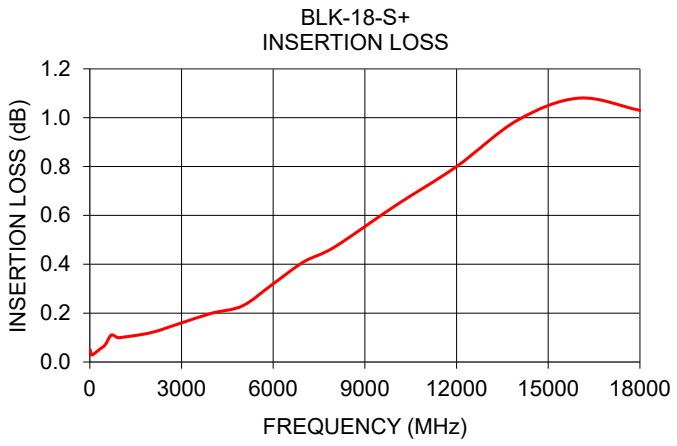
DC Block

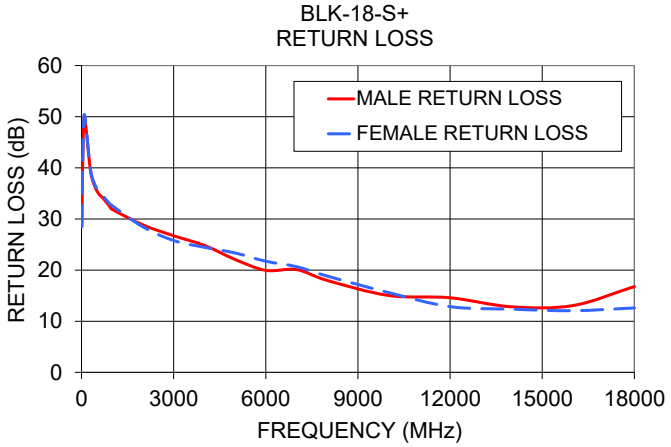
BLK-18-S+

50Ω 0.01 to 18 GHz SMA Female to SMA Male

TYPICAL PERFORMANCE DATA AND CHARTS

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		Male	Female
10.00	0.05	28.49	28.48
50.00	0.03	45.13	45.06
100.00	0.03	50.04	50.34
300.00	0.05	39.11	39.36
500.00	0.07	35.50	35.89
700.00	0.11	34.05	34.48
900.00	0.10	32.59	33.09
1000.00	0.10	31.87	32.59
2000.00	0.12	28.84	28.45
3000.00	0.16	26.71	25.78
4000.00	0.20	24.84	24.46
5000.00	0.23	22.08	23.35
6000.00	0.32	19.95	21.73
7000.00	0.41	20.10	20.67
8000.00	0.47	17.98	18.83
10000.00	0.64	15.04	15.60
12000.00	0.80	14.59	12.85
14000.00	0.99	12.82	12.36
16000.00	1.08	13.07	12.06
18000.00	1.03	16.78	12.60





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

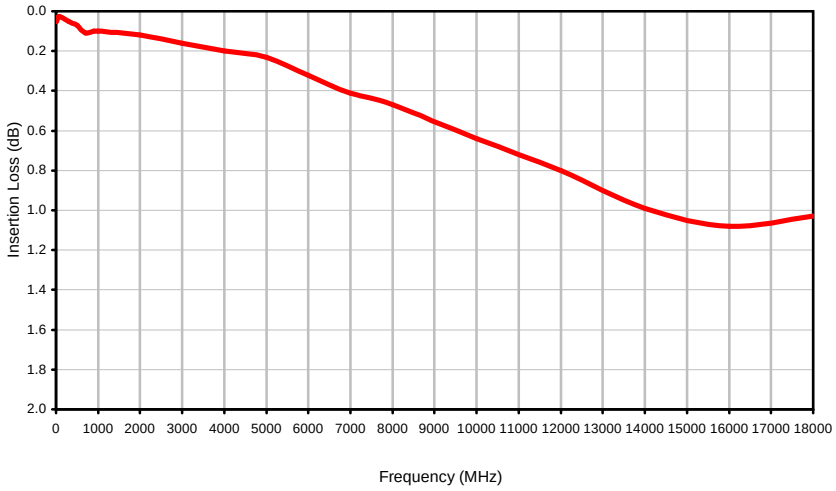
DC Block, SMA BLK-18-S+

Typical Performance Data

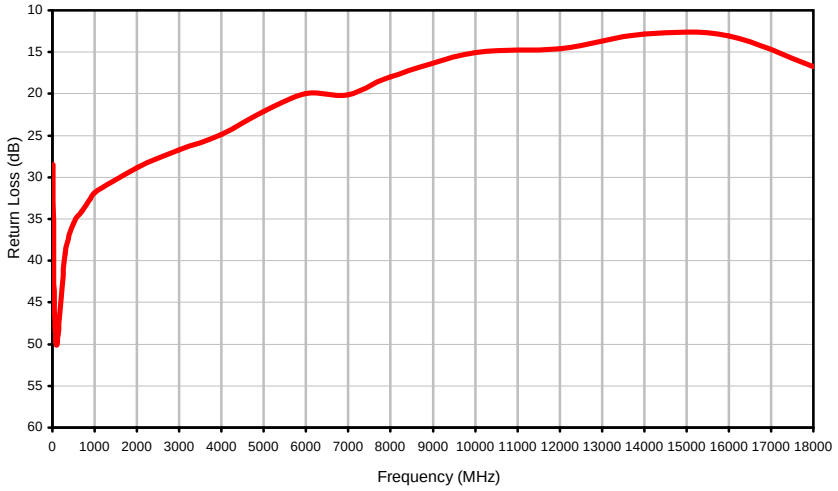
FREQUENCY (MHz)	INSERTION LOSS (dB)	MALE RETURN LOSS (dB)	FEMALE RETURN LOSS (dB)
10	0.05	28.49	28.48
50	0.03	45.13	45.06
100	0.03	50.04	50.34
300	0.05	39.11	39.36
500	0.07	35.50	35.89
700	0.11	34.05	34.48
900	0.10	32.59	33.09
1000	0.10	31.87	32.59
2000	0.12	28.84	28.45
3000	0.16	26.71	25.78
4000	0.20	24.84	24.46
5000	0.23	22.08	23.35
6000	0.32	19.95	21.73
7000	0.41	20.10	20.67
8000	0.47	17.98	18.83
10000	0.64	15.04	15.60
12000	0.80	14.59	12.85
14000	0.99	12.82	12.36
16000	1.08	13.07	12.06
18000	1.03	16.78	12.60

Typical Performance Curves

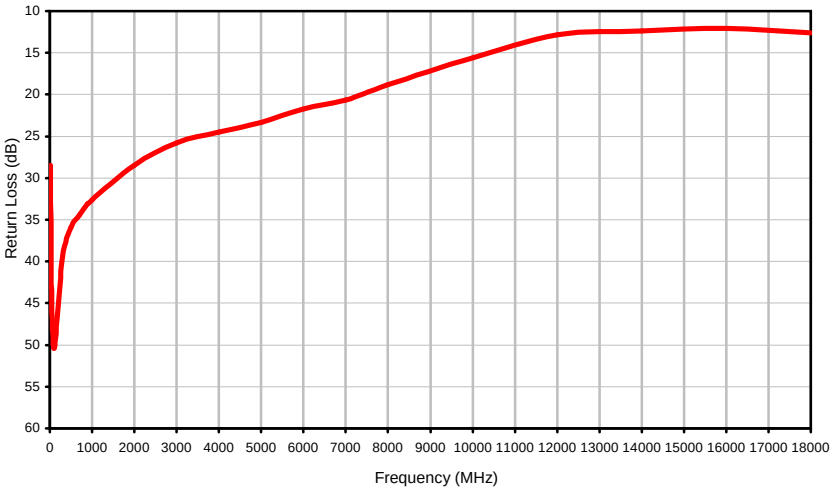
Insertion Loss



Male Return Loss



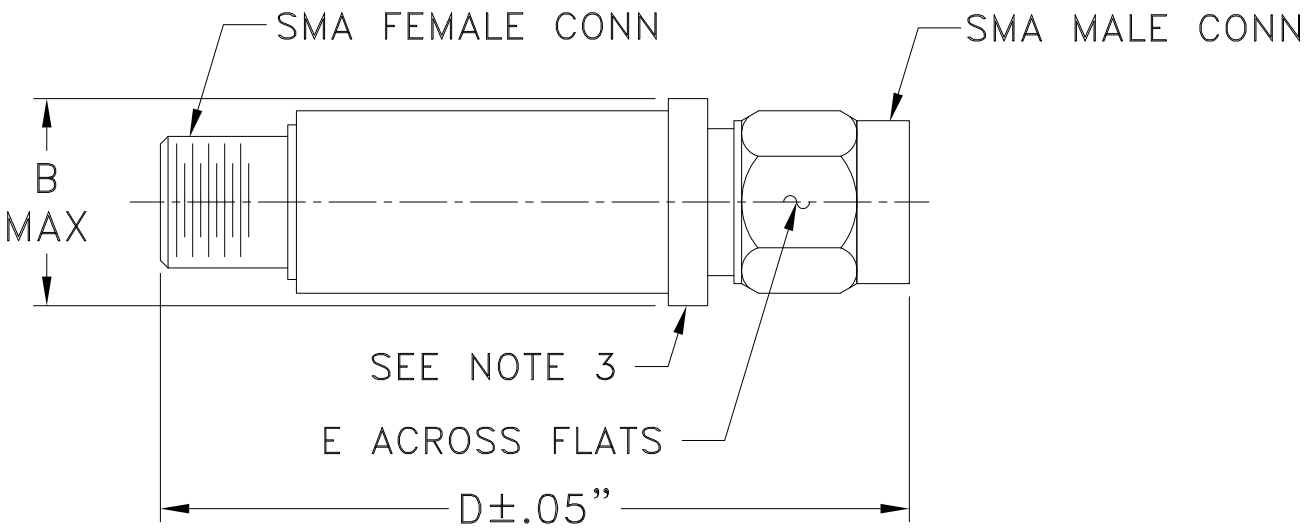
Female Return Loss



Case Style FF

FF888

Outline Dimensions



CASE #.	A	B	C	D	E	WT GRAMS
FF888	-- --	.410 (10.41)	-- --	1.18 (29.97)	.312 (7.92)	7.0

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

Notes:

1. Case material: Stainless steel.
2. Case finish: Passivated.
3. Round Flange may have .312 Across Flats in some models.

Mini-Circuits

Environmental Specifications ENV28

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
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