



COAXIAL

DC Block SMA

BLK-18-S+

Mini-Circuits

50Ω 0.01 to 18 GHz

THE BIG DEAL

- 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-18-S+
Case Style	FF888
Connectors	SMA

+RoHS Compliant

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

PRODUCT OVERVIEW

Mini-Circuits' BLK-18-S+ is a coaxial DC Block supporting a wide range of applications from 10 MHz to 18 GHz including test and measurement. This model provides low insertion loss, excellent return loss and voltage handling upto 50V. This unit features SMA-Female connector at one end and SMA-Male at another end and comes in rugged stainless steel body.

KEY FEATURES

Features	Advantages
Wideband, 10 MHz to 18 GHz	Wide frequency range up to 18 GHz provides application flexibility and makes this model ideal for broad-band and multi-band use.
Excellent Return Loss, 18 dB typ at 8 GHz	Provides good matching for 50Ω systems and minimizes signal reflections across wide frequency range enabling its use in test and measurement.
Low insertion loss, 1 dB typ at 18GHz	Provides excellent signal power transmission from input to output.
Stainless steel construction	Stands up to wear and tear in demanding test environments and provides excellent reliability.
Very wide operating temperature range, -55 to +100 °C	Withstands wide operating conditions



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ELECTRICAL SPECIFICATIONS AT 25°C

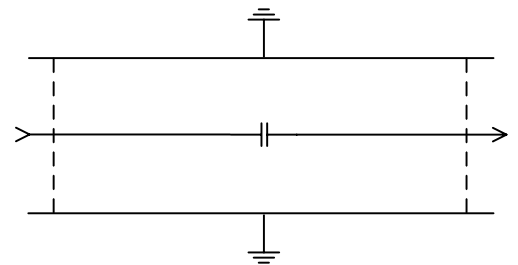
Parameter	Condition (GHz)	Min.	Typ.	Max.	Units
Frequency Range		0.01	—	18	GHz
Insertion Loss	0.01 - 0.1	—	0.02	0.2	dB
	0.1 - 1.0	—	0.07	0.3	
	1.0 - 4.0	—	0.15	0.65	
	4.0 - 8.0	—	0.38	1.0	
	8.0 - 18	—	1.00	—	
Return Loss	0.01 - 0.1	20	26	—	dB
	0.1 - 1.0	20	36	—	
	1.0 - 4.0	20	24	—	
	4.0 - 8.0	15	18	—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

MAXIMUM RATINGS

Parameter	Ratings
Operating Case Temperature	-55 °C to +100 °C
Storage Temperature	-55 °C to +100 °C
DC Input Voltage at inner/outer conductor	50V max.
Input Power	36 dBm max.

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

ELECTRICAL SCHEMATIC





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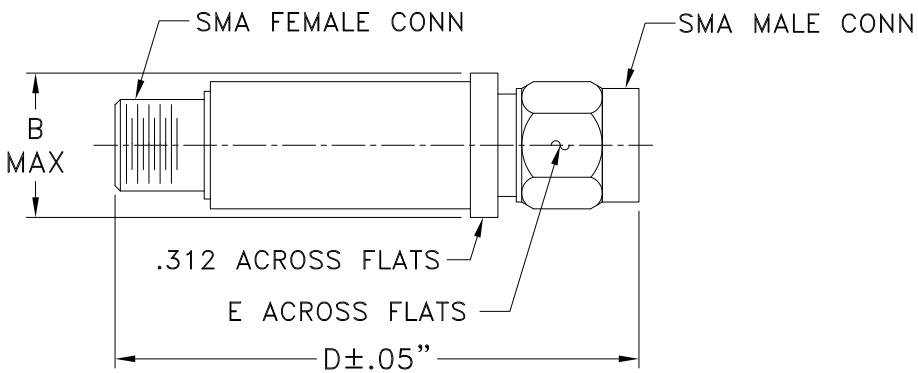
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COAXIAL CONNECTIONS

PORT 1	SMA-Male
PORT 2	SMA-Female

OUTLINE DRAWING



OUTLINE DIMENSIONS (Inch/mm)

B	D	E	wt.
.410	1.18	.312	grams
10.41	29.97	7.92	7.0

Note. Please refer to case style drawing for details



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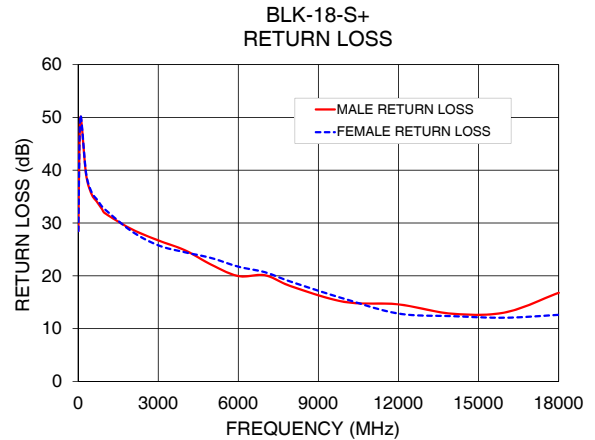
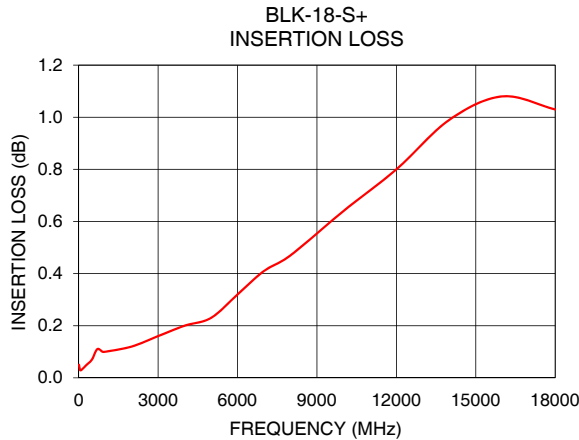
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TYPICAL PERFORMANCE DATA

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		Male	Female
10	0.05	28.49	28.48
50	0.03	45.13	45.06
100	0.03	50.04	50.34
500	0.07	35.50	35.89
700	0.11	34.05	34.48
1000	0.10	31.87	32.59
2000	0.12	28.84	28.45
4000	0.20	24.84	24.46
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
16000	1.08	13.07	12.06
18000	1.03	16.78	12.60



NOTES

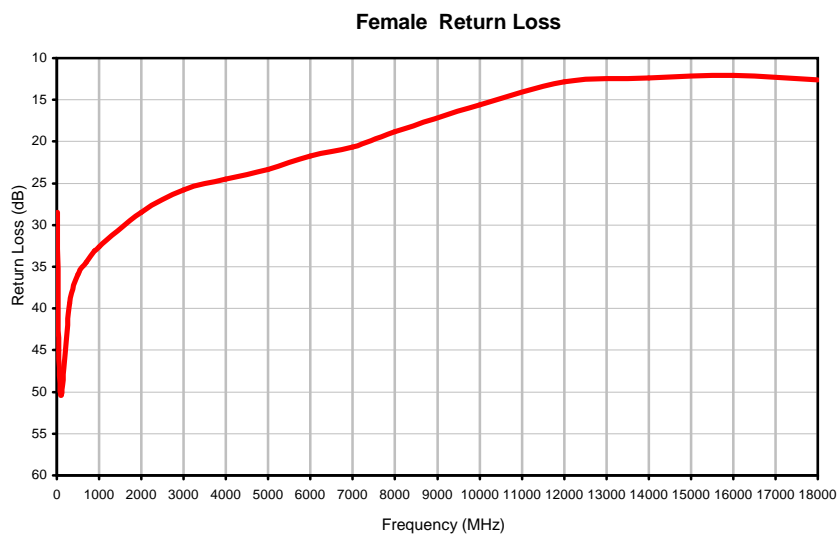
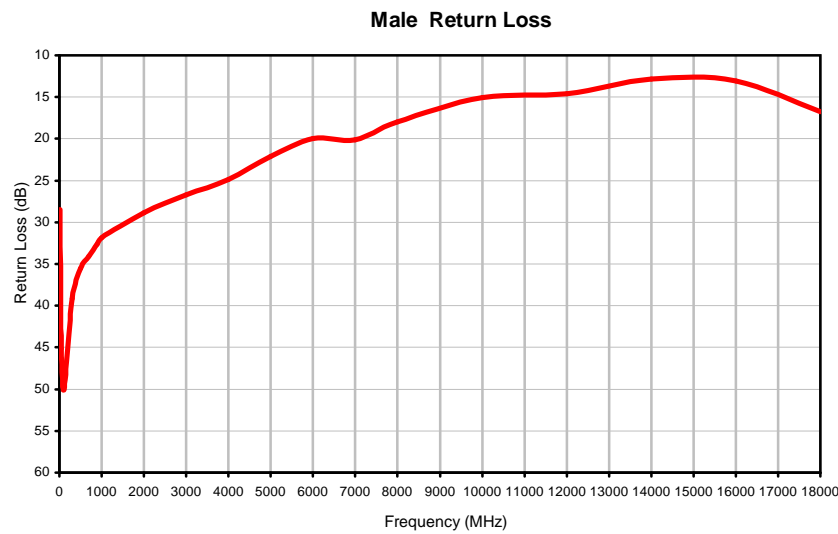
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Typical Performance Data

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

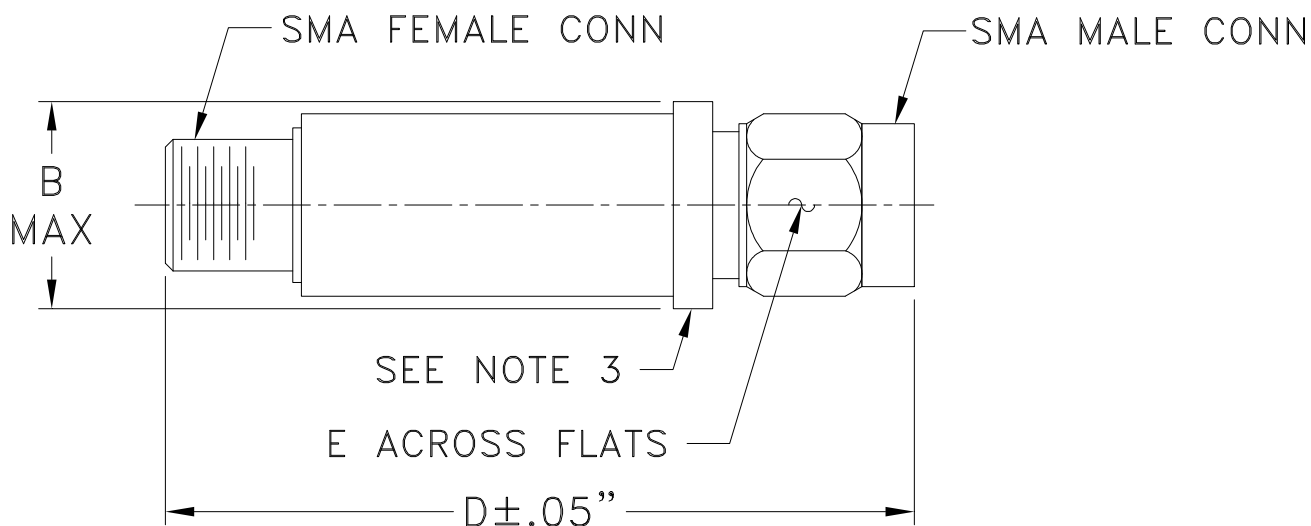


Case Style

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.

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RF/IF MICROWAVE COMPONENTS

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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