



THE BIG DEAL

- Low insertion loss, 0.1 dB typ.
- Excellent VSWR, 1.1 typ.
- Low cost adapters, available from stock
- Passivated stainless steel body and gold-plated beryllium copper center connector



Generic photo used for illustration purposes only

Model No.	SFR-NM50+
Case Style	DJ2556
Connectors	SMA-Female to N-Male

+RoHS Compliant

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

APPLICATIONS

- Interconnection of RF cable and equipment

PRODUCT OVERVIEW

Mini-Circuits' SFR-NM50+ is a right-angle SMA-Female to N-Male adapter supporting a wide range of applications from DC to 18 GHz. This model provides excellent VSWR, low insertion loss, and flat response versus frequency. The SFR-NM50+ features passivated stainless steel body, nickel plated brass housing and Gold-plated beryllium copper construction center contact.

KEY FEATURES

Feature	Advantages
Wideband, DC to 18 GHz	Wide frequency range provides application flexibility and makes this model ideal for broadband and multi-band use.
Excellent VSWR, 1.11:1 typ.	Provides good matching for 50Ω systems and minimizes signal reflections across wide frequency range.
Low insertion loss, 0.1 dB	Provides excellent signal power transmission from input to output.
Passivated stainless steel body and Gold-plated beryllium copper construction center contact	Stands up to wear and tear in demanding environments and provides excellent reliability.
Very wide operating temperature range, -55 to +100 °C	Withstands extreme operating conditions and is suitable for use near high power componentry where heat rise is common.



ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Condition (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC		18	GHz
Insertion Loss	DC - 6	—	0.07	0.2	dB
	6 - 12	—	0.10	0.3	
	12 - 18	—	0.08	0.34	
VSWR	DC - 6	—	1.03	1.2	:1
	6 - 12	—	1.07	1.3	
	12 - 18	—	1.13	1.3	

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C

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



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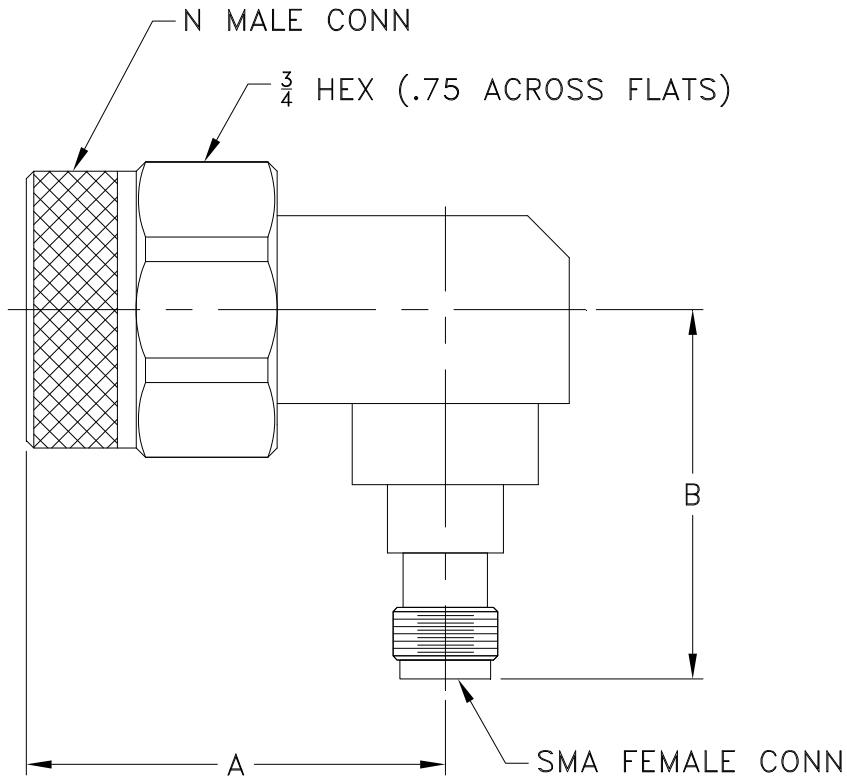
COAXIAL

Adapter

SFR-NM50+

50Ω DC to 18 GHz SMA-Female to N-Male

OUTLINE DRAWING



OUTLINE DIMENSIONS (Inch mm)

A	B	C	D	E	wt
1.00	0.88	--	--	--	grams
25.4	22.3	--	--	--	48.0





COAXIAL

Adapter

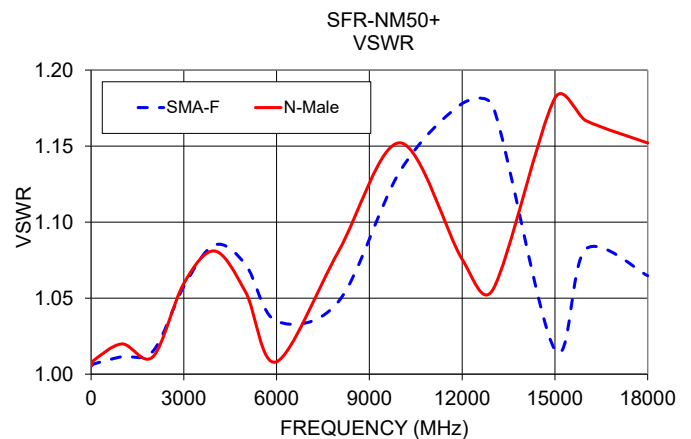
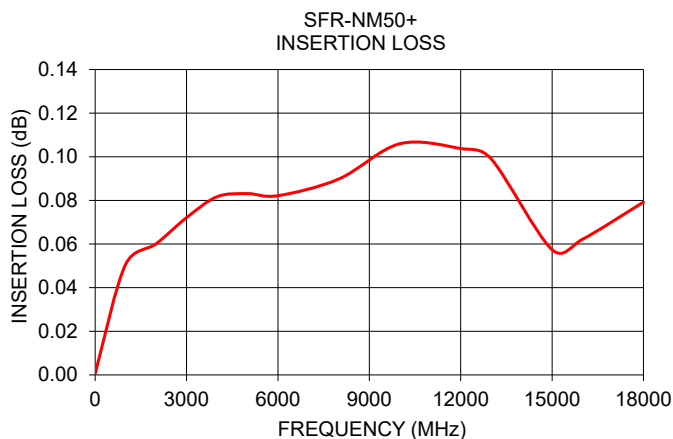
SFR-NM50+

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50Ω DC to 18 GHz SMA-Female to N-Male

TYPICAL PERFORMANCE DATA

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	
		SMA-Female	N-Male
10	0.00	1.01	1.01
100	0.01	1.01	1.01
1000	0.05	1.01	1.02
2000	0.06	1.02	1.01
3000	0.07	1.06	1.06
4000	0.08	1.09	1.08
5000	0.08	1.07	1.05
6000	0.08	1.03	1.01
8000	0.09	1.05	1.08
10000	0.11	1.13	1.15
12000	0.10	1.18	1.08
13000	0.10	1.18	1.06
15000	0.06	1.02	1.18
16000	0.06	1.08	1.17
18000	0.08	1.06	1.15



NOTES

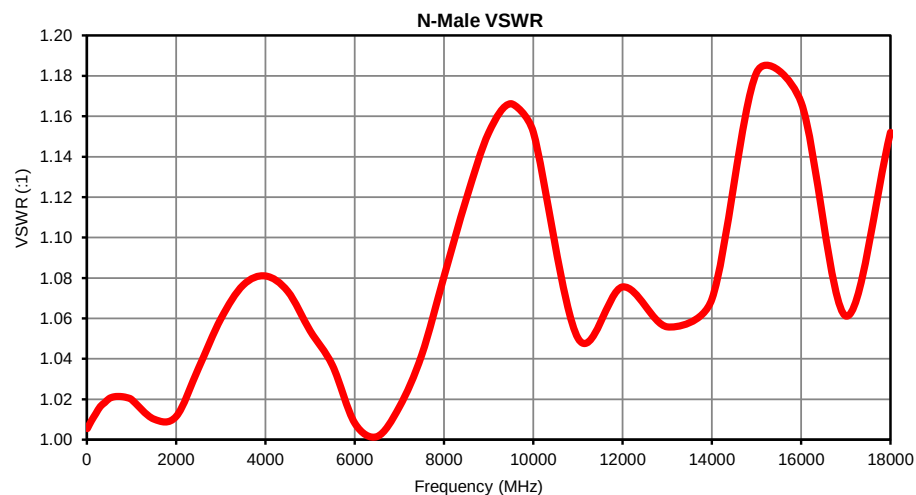
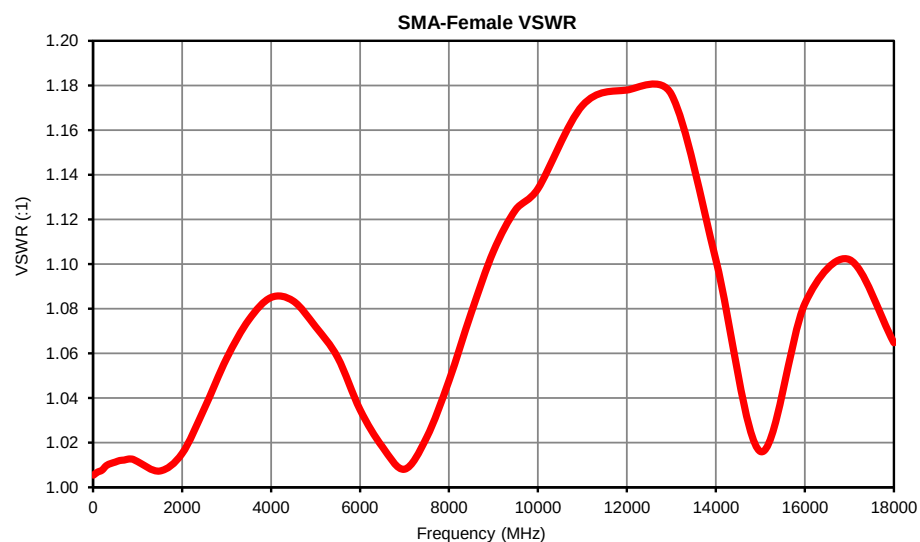
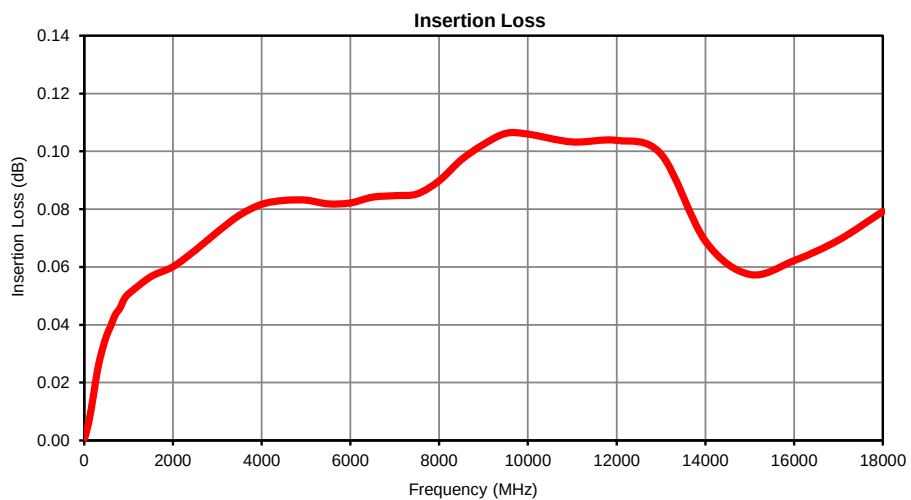
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- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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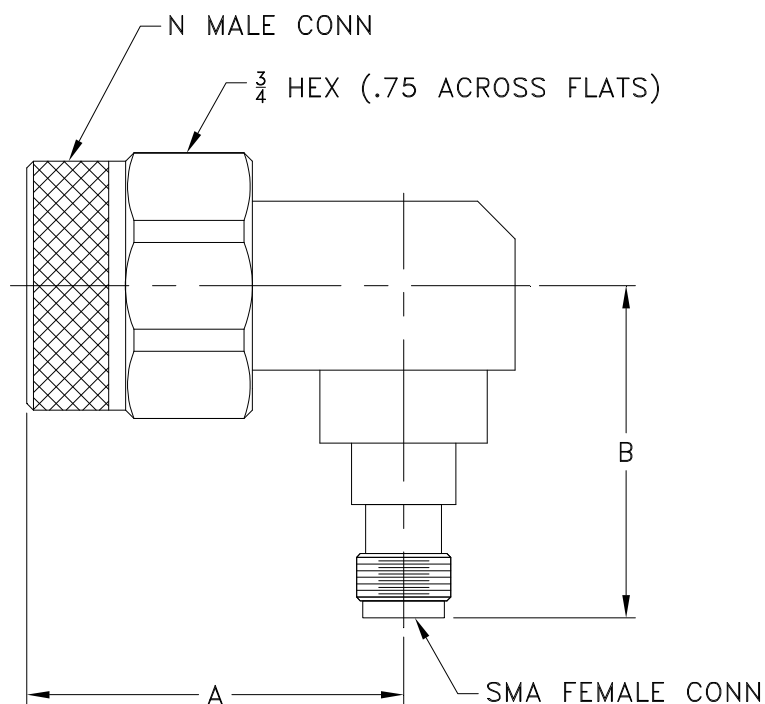
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	SMA-FEMALE VSWR (:1)	N-MALE VSWR (:1)
10	0.00	1.01	1.01
100	0.01	1.01	1.01
200	0.01	1.01	1.01
300	0.02	1.01	1.02
400	0.03	1.01	1.02
500	0.04	1.01	1.02
600	0.04	1.01	1.02
700	0.04	1.01	1.02
800	0.05	1.01	1.02
900	0.05	1.01	1.02
1000	0.05	1.01	1.02
1500	0.06	1.01	1.01
2000	0.06	1.02	1.01
2500	0.07	1.04	1.04
3000	0.07	1.06	1.06
3500	0.08	1.08	1.08
4000	0.08	1.09	1.08
4500	0.08	1.08	1.07
5000	0.08	1.07	1.05
5500	0.08	1.06	1.04
6000	0.08	1.03	1.01
6500	0.08	1.02	1.00
7000	0.08	1.01	1.02
7500	0.09	1.02	1.04
8000	0.09	1.05	1.08
8500	0.10	1.08	1.12
9000	0.10	1.11	1.15
9500	0.11	1.12	1.17
10000	0.11	1.13	1.15
11000	0.10	1.17	1.05
12000	0.10	1.18	1.08
13000	0.10	1.18	1.06
14000	0.07	1.10	1.07
15000	0.06	1.02	1.18
16000	0.06	1.08	1.17
17000	0.07	1.10	1.06
18000	0.08	1.06	1.15

Typical Performance Curves



Outline Dimensions



CASE #	A	B	C	D	E	WT. GRAM
DJ2556	1.00 (25.4)	.88 (22.3)	-- --	-- --	-- --	48.00

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

Note:

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



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 or -55° to 85° C or -45° to 100° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 100°C, 5 cycles	MIL-STD-202, Method 107, Condition B except over -55° to 100°C
Connector Durability	500 mating/unmating cycles	MIL-PRF-39012E, PARAGRAPH 4.6.12
Drop Test	1 meter height, 5 times	