



KEY FEATURES

- Wideband, DC to 27 GHz
- Low Insertion Loss, 0.05 dB Typ.
- Excellent VSWR, 1.08:1 Typ.



Generic photo used for illustration purposes only

PRODUCT OVERVIEW

Mini-Circuits' SF-SM50-27+ is a coaxial SMA Female to SMA Male adapter supporting a wide range of applications from DC to 27 GHz. This model provides excellent VSWR and low insertion loss versus frequency. The SF-SM50-27+ features passivated stainless-steel construction and measures only 0.72" in length.

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Condition (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC		27	GHz
Insertion Loss	DC-12	—	0.03	0.3	dB
	12-18	—	0.05	0.3	
	18-27	—	0.07	0.3	
VSWR	DC-12	—	1.04	1.20	:1
	12-18	—	1.08	1.20	
	18-27	—	1.12	1.20	

ABSOLUTE MAXIMUM RATINGS¹

Parameter	Ratings
Operating Case Temperature	-45 °C to +125 °C
Storage Temperature	-45 °C to +125 °C

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



COAXIAL

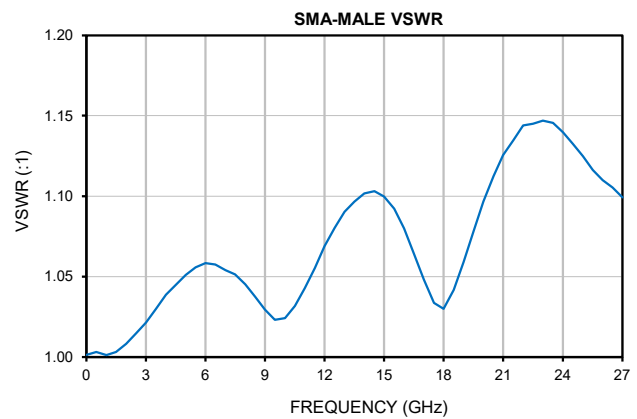
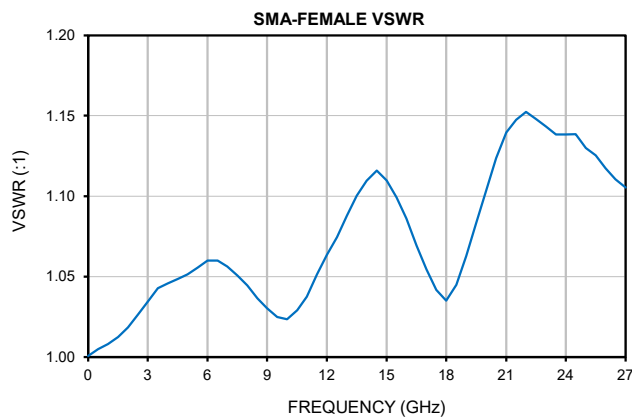
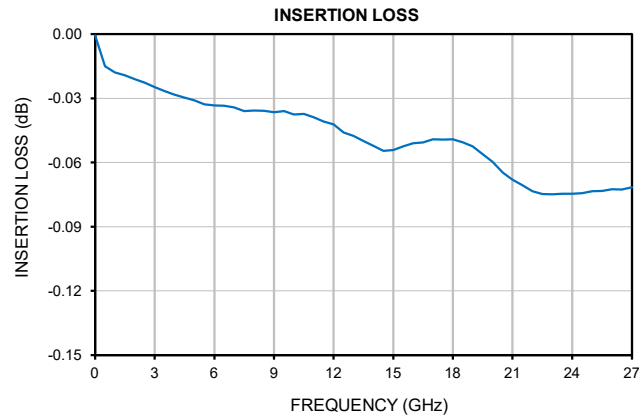
Adapter

SF-SM50-27+

Mini-Circuits

50 Ω DC to 27 GHz SMA-Female to SMA-Male

TYPICAL PERFORMANCE GRAPHS

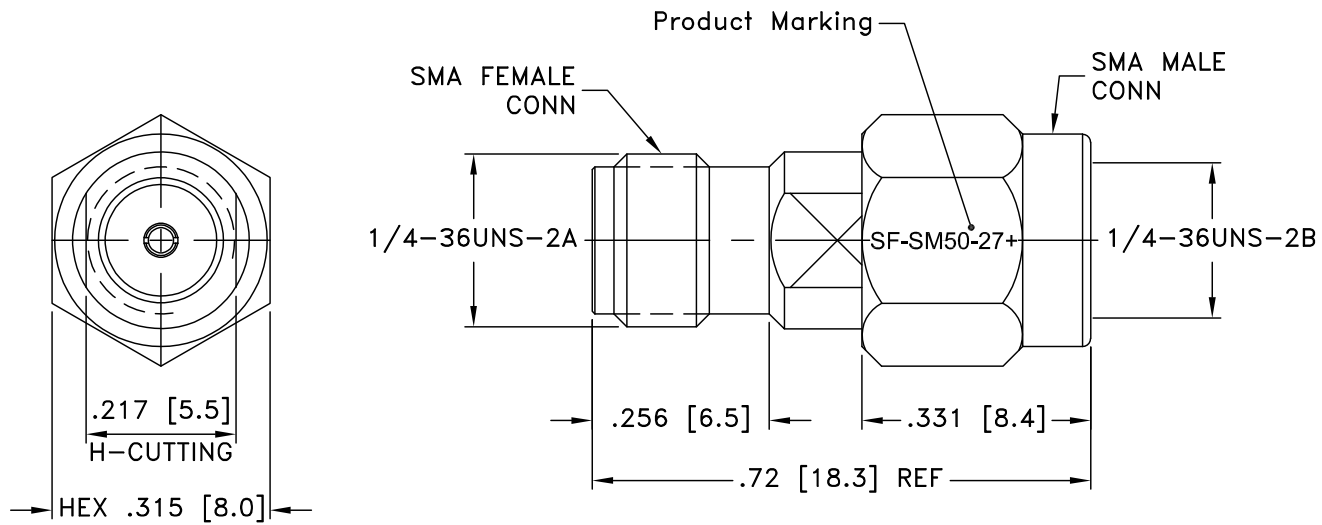




CONNECTOR SPECIFICATIONS

Description	Connector 1	Connector 2
Connector Type	SMA Female	SMA Male
Orientation	Straight	Straight

CASE STYLE DRAWING



Weight: 3.1 grams

Dimensions are in inches [mm]. Tolerances: 2 Pl. ±.030; 3 Pl. ±.015 Inches

PRODUCT MARKING*: SF-SM50-27+

*Marking may contain other features or characters for internal lot control.



Mini-Circuits

COAXIAL

Adapter

SF-SM50-27+

50Ω DC to 27 GHz SMA-Female to SMA-Male

ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD

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Performance Data & Graphs	Data
	Graphs
	S-Parameter (S2P Files) Data Set (.zip file)
Case Style	DJ3488-1
RoHs Status	Compliant
Environmental Ratings	ENV70T4

NOTES

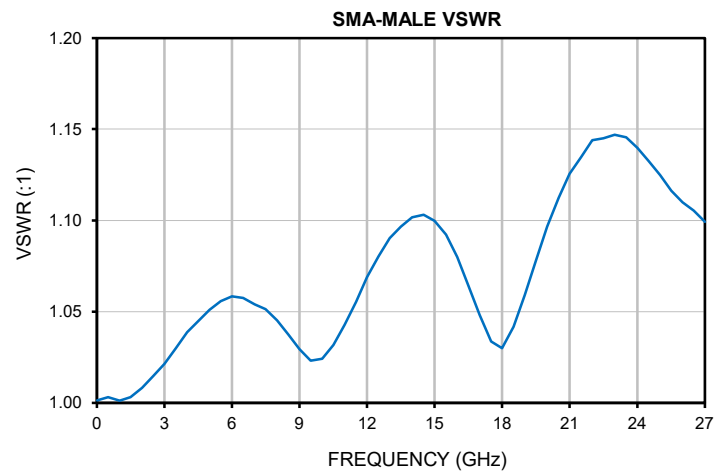
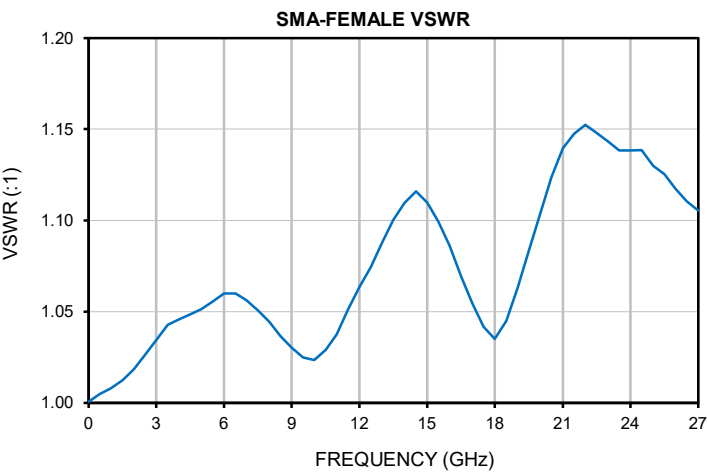
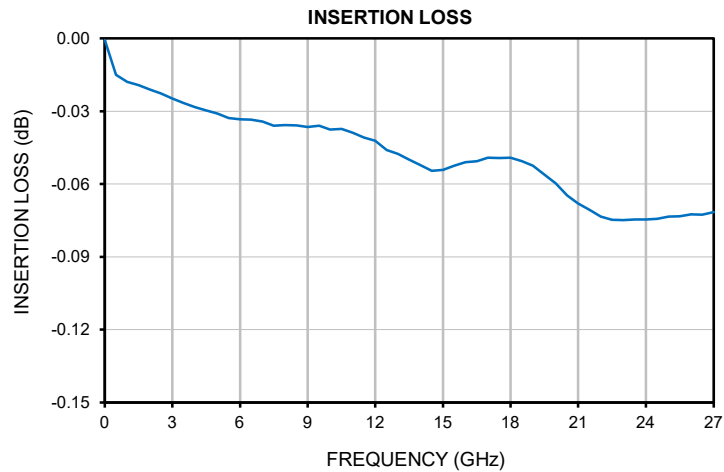
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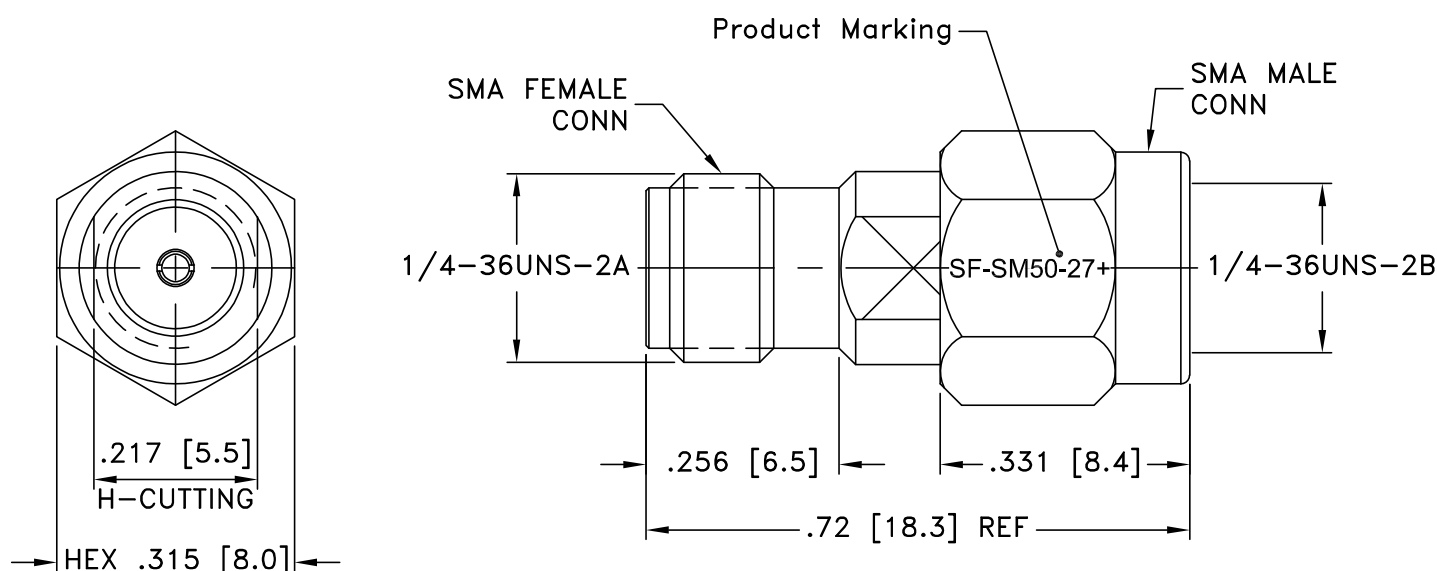


Typical Performance Data

FREQ.	INSERTION LOSS	SMA-FEMALE VSWR	SMA-MALE VSWR
(GHz)	(dB)	(:1)	(:1)
0.01	0.00	1.00	1.00
0.5	0.02	1.00	1.00
1.0	0.02	1.01	1.00
1.5	0.02	1.01	1.00
2.0	0.02	1.02	1.01
2.5	0.02	1.03	1.01
3.0	0.02	1.03	1.02
3.5	0.03	1.04	1.03
4.0	0.03	1.05	1.04
4.5	0.03	1.05	1.04
5.0	0.03	1.05	1.05
5.5	0.03	1.06	1.06
6.0	0.03	1.06	1.06
6.5	0.03	1.06	1.06
7.0	0.03	1.06	1.05
7.5	0.04	1.05	1.05
8.0	0.04	1.04	1.05
8.5	0.04	1.04	1.04
9.0	0.04	1.03	1.03
9.5	0.04	1.02	1.02
10.0	0.04	1.02	1.02
10.5	0.04	1.03	1.03
11.0	0.04	1.04	1.04
11.5	0.04	1.05	1.06
12.0	0.04	1.06	1.07
12.5	0.05	1.07	1.08
13.0	0.05	1.09	1.09
13.5	0.05	1.10	1.10
14.0	0.05	1.11	1.10
14.5	0.05	1.12	1.10
15.0	0.05	1.11	1.10
15.5	0.05	1.10	1.09
16.0	0.05	1.09	1.08
16.5	0.05	1.07	1.06
17.0	0.05	1.05	1.05
17.5	0.05	1.04	1.03
18.0	0.05	1.04	1.03
18.5	0.05	1.04	1.04
19.0	0.05	1.06	1.06
19.5	0.06	1.08	1.08
20.0	0.06	1.10	1.10
20.5	0.06	1.12	1.11
21.0	0.07	1.14	1.13
21.5	0.07	1.15	1.13
22.0	0.07	1.15	1.14
22.5	0.07	1.15	1.15
23.0	0.07	1.14	1.15
23.5	0.07	1.14	1.15
24.0	0.07	1.14	1.14
24.5	0.07	1.14	1.13
25.0	0.07	1.13	1.12
25.5	0.07	1.13	1.12
26.0	0.07	1.12	1.11
26.5	0.07	1.11	1.11
27.0	0.07	1.11	1.10

Typical Performance Curves





Weight: 3.1 grams

Dimensions are in inches [mm]. Tolerances: 2 Pl. ± 0.030 ; 3 Pl. ± 0.015 Inches

Notes:

Case material: Stainless steel.
Case Finish: Passivated.

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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° C to 125° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-45° C to 125° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-45° to 125°C, 5 Cycles	MIL-STD-202, Method 107
Connector Durability	500 mating/unmating cycles	MIL-PRF-39012E, PARAGRAPH 4.6.12