COAXIAL

Adapter

SF-SM50-27+

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

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

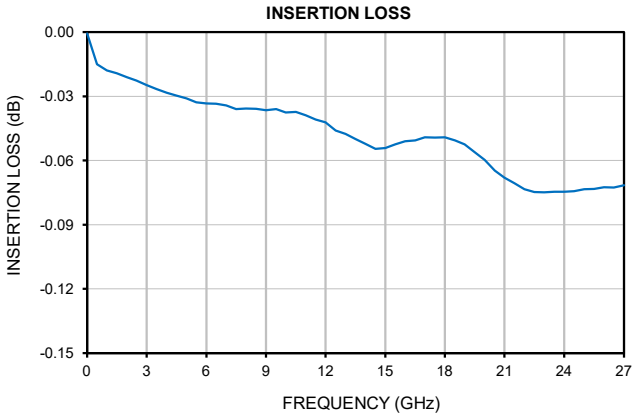
Parameter	Condition (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC		27	GHz
Insertion Loss	DC-12	—	0.03	0.3	dB
	12-18	—	0.05	0.3	
	18-27	—	0.07	0.3	
VSWR	DC-12	—	1.04	1.20	:1
	12-18	—	1.08	1.20	
	18-27	—	1.12	1.20	

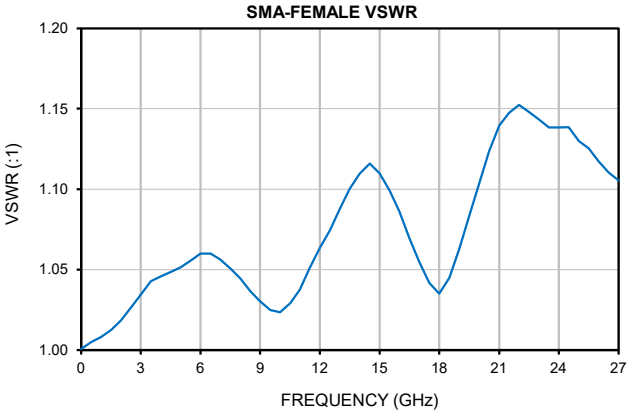
ABSOLUTE MAXIMUM RATINGS[1]

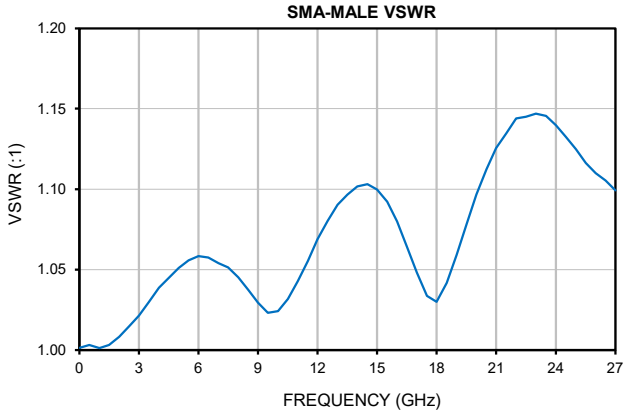
Parameter	Ratings
Operating Case Temperature	-45 °C to +125 °C
Storage Temperature	-45 °C to +125 °C

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

TYPICAL PERFORMANCE GRAPHS







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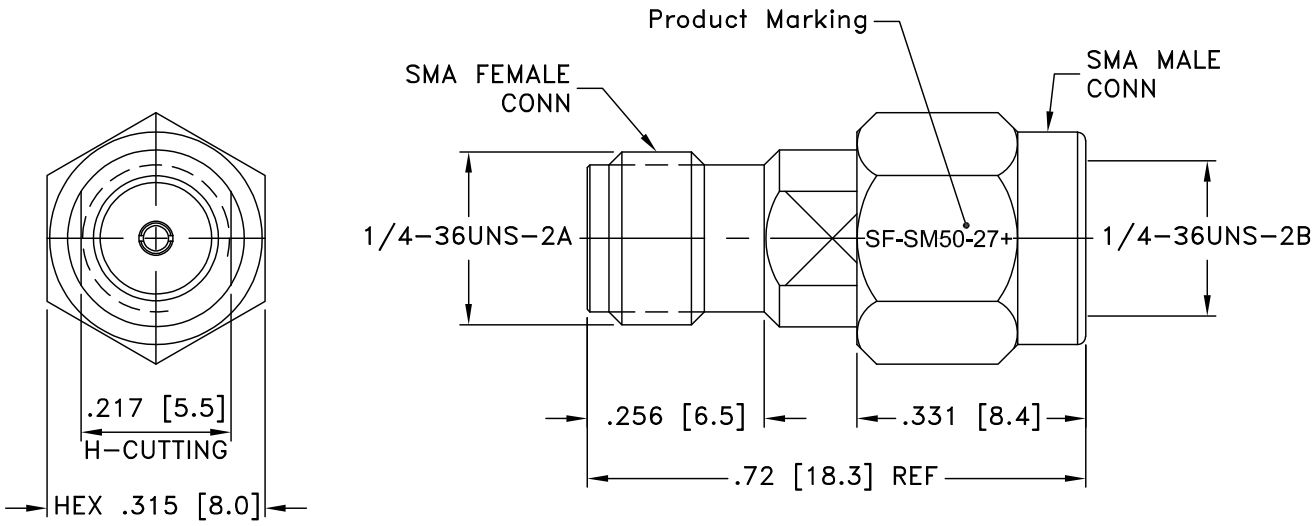
CONNECTOR SPECIFICATIONS

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.

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ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD CLICK HERE

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

NOTES

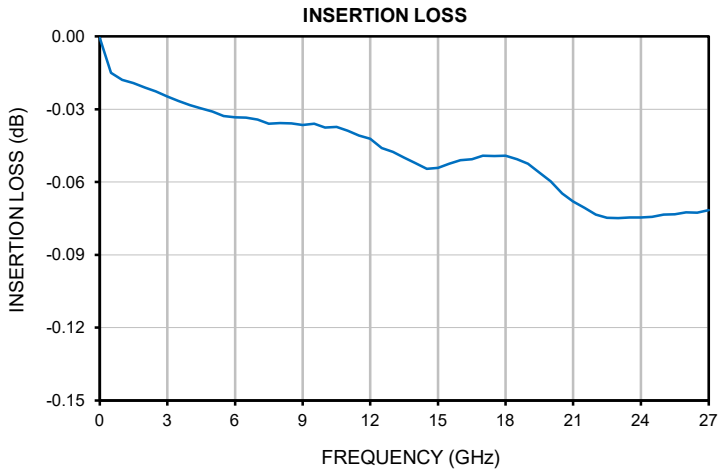
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's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

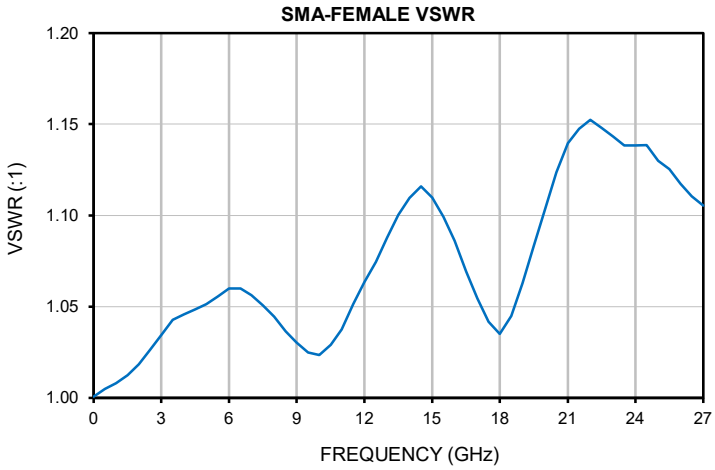
Adaptor SMA-Female to SMA-Male SF-SM50-27+

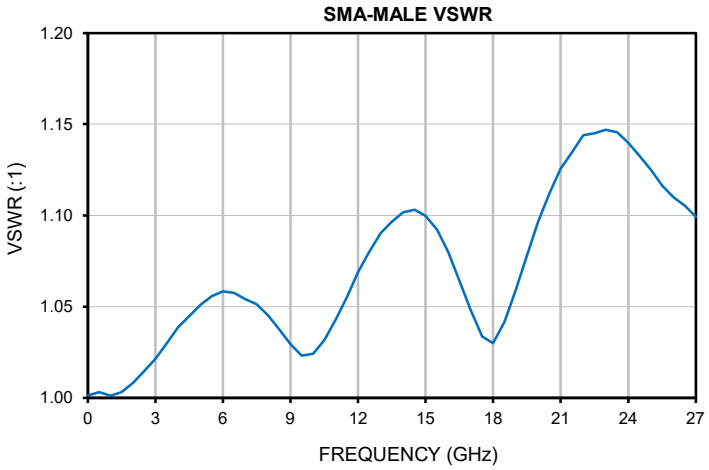
Typical Performance Data

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



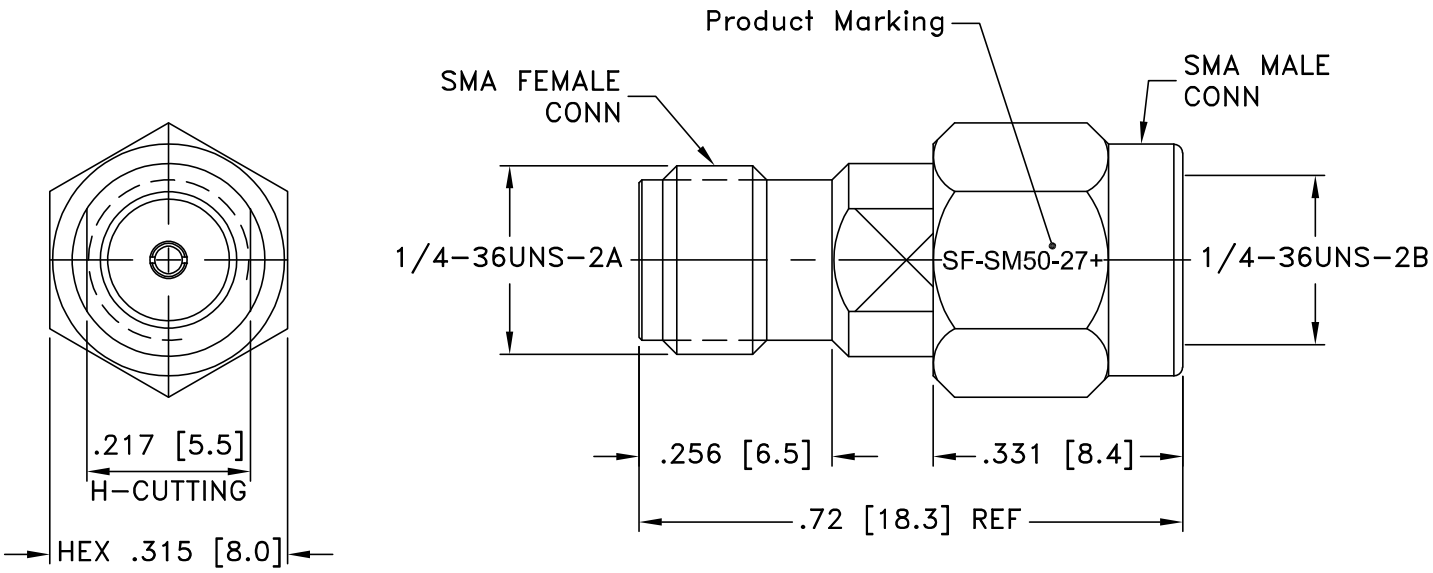




Case Style DJ

Outline Dimensions

DJ3488-1



Weight: 3.1 grams

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

Notes:

Case material:	Stainless steel.
Case Finish:	Passivated.

Mini-Circuits

Environmental Specifications ENV70T4

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