



KEY FEATURES

- Wideband, DC to 27 GHz
- Low Insertion Loss, 0.01 dB Typ.
- Excellent VSWR, 1.05:1 Typ.



Generic photo used for illustration purposes only

PRODUCT OVERVIEW

Mini-Circuits' SMPM-SF50-27+ is a coaxial full detent SMP Male to SMA Female adapter supporting a wide range of applications from DC to 27 GHz. This model provides excellent VSWR and low insertion loss versus frequency. The SMPM-SF50-27+ features passivated stainless-steel construction and measures only 0.71" in length.

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Condition (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC		27	GHz
Insertion Loss	DC-12	—	0.08	0.21	dB
	12-18	—	0.10	0.25	
	18-27	—	0.12	0.31	
VSWR	DC-12	—	1.03	1.15	:1
	12-18	—	1.05	1.15	
	18-27	—	1.08	1.15	

ABSOLUTE MAXIMUM RATINGS¹

Parameter	Ratings
Operating Case Temperature	-55 °C to +105 °C
Storage Temperature	-65 °C to +125 °C

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



COAXIAL

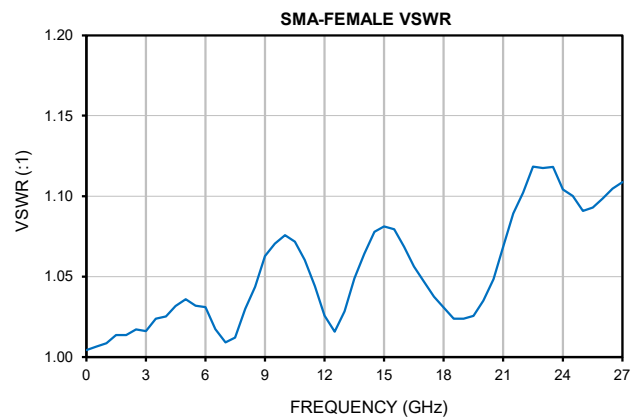
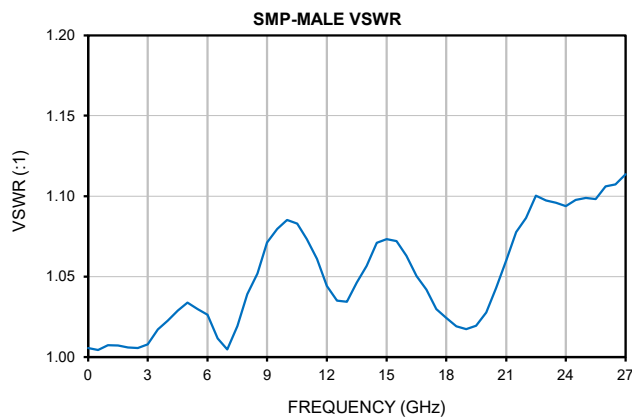
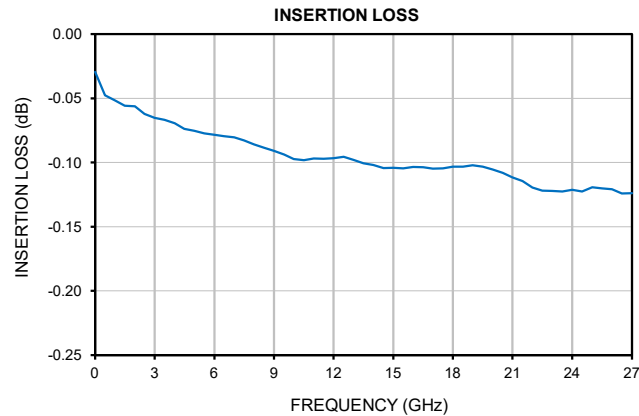
Adapter

SMPM-SF50-27+

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

TYPICAL PERFORMANCE GRAPHS





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Adapter

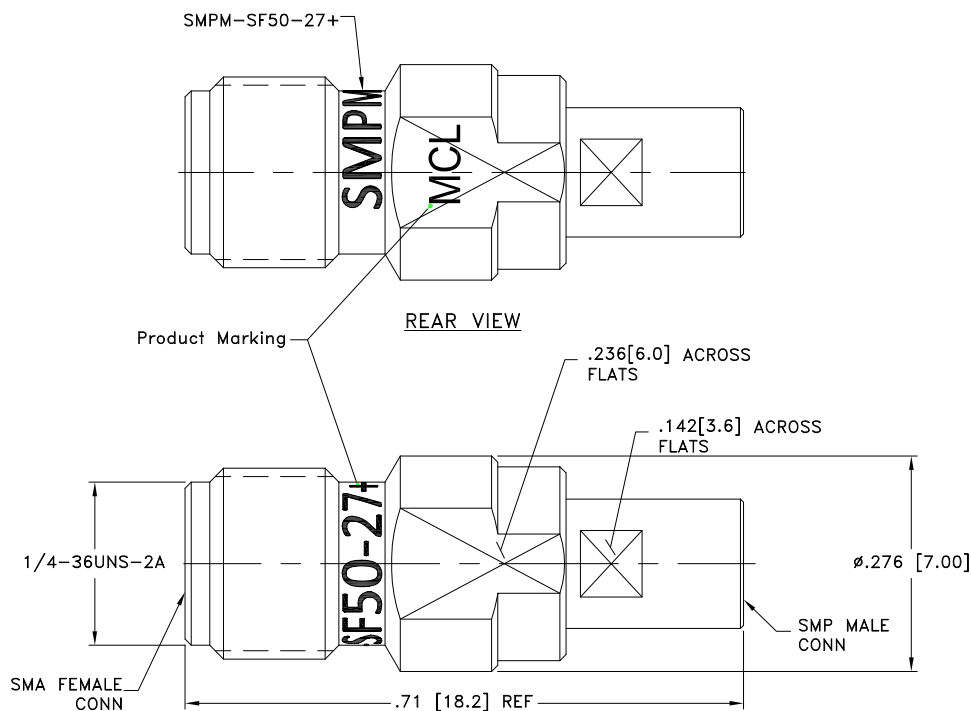
SMPM-SF50-27+

Mini-Circuits

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

CONNECTOR SPECIFICATIONS

Description	Connector 1	Connector 2
Connector Type	Full Detent SMP Male	SMA Female
Orientation	Straight	Straight
Connector Standard	MIL-STD-348B	MIL-STD-348B

CASE STYLE DRAWING

Weight: 2.25 grams

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

PRODUCT MARKING*: SMPM-SF50-27+

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





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Adapter

SMPM-SF50-27+

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

ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD

[CLICK HERE](#)

Performance Data & Graphs	Data
	Graphs
	S-Parameter (S2P Files) Data Set (.zip file)
Case Style	DJ3488-4
RoHs Status	Compliant
Environmental Ratings	ENV70T3

NOTES

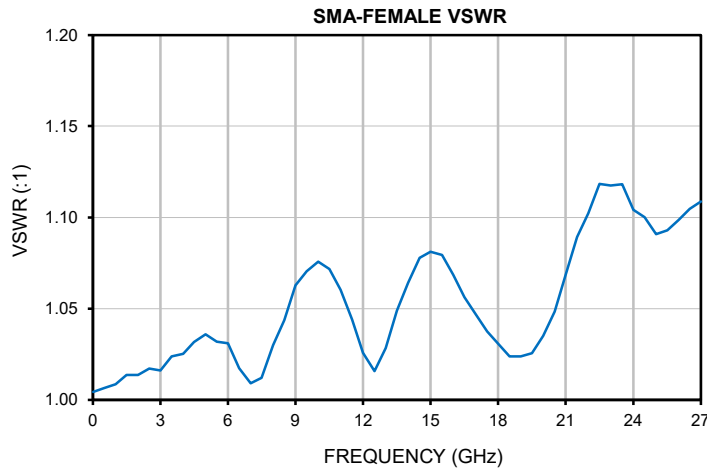
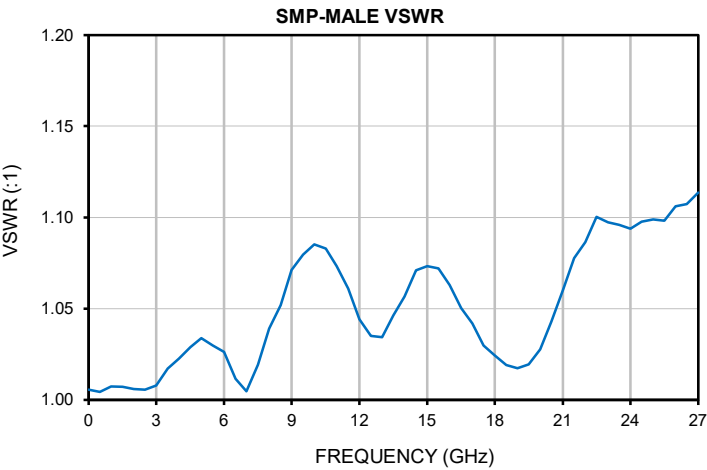
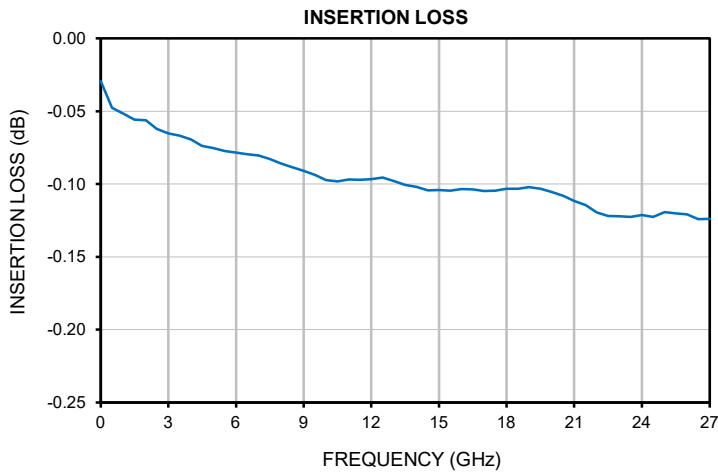
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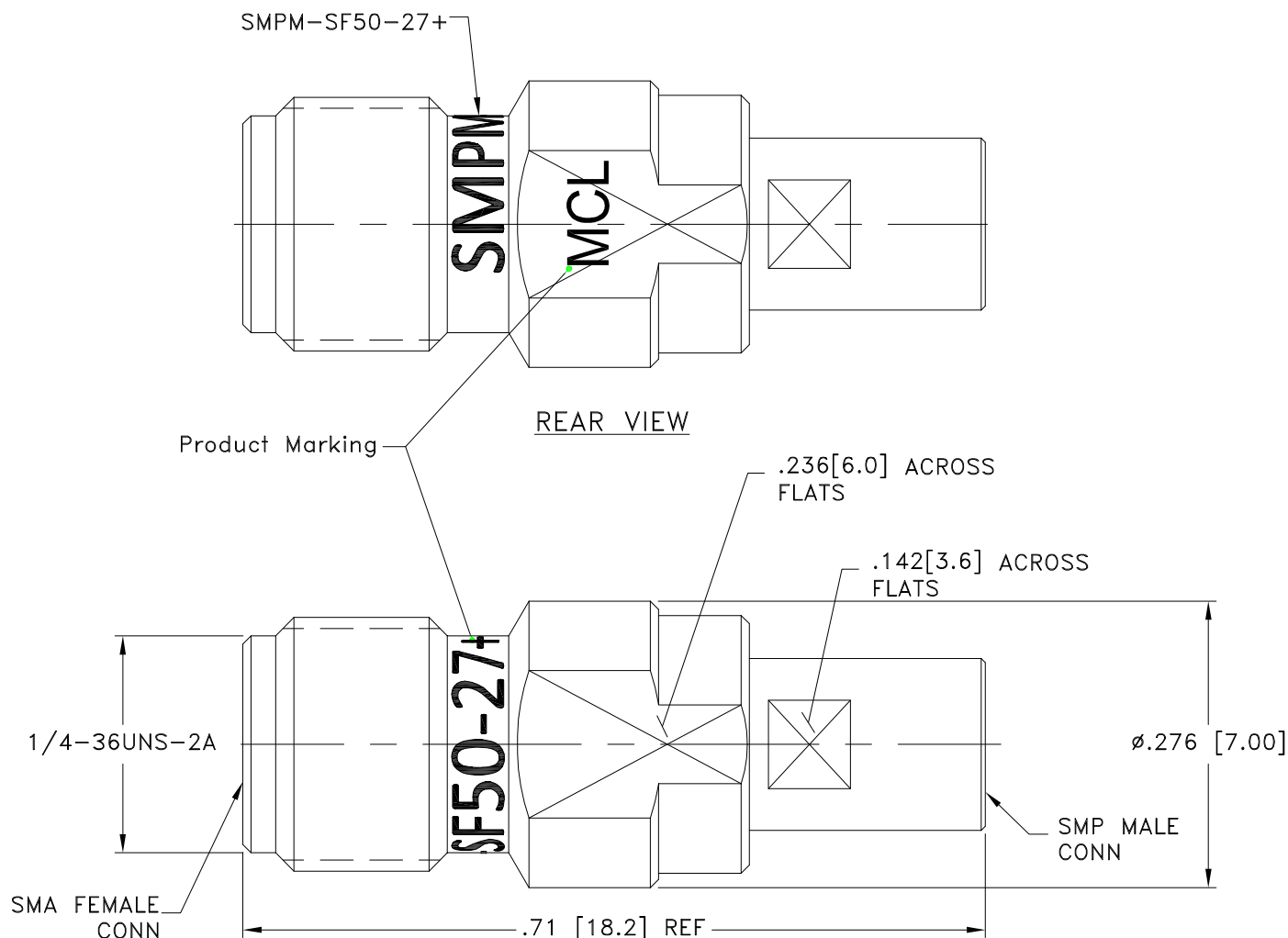


Typical Performance Data

FREQ.	INSERTION LOSS	SMP-MALE VSWR	SMA-FEMALE VSWR
(GHz)	(dB)	(:1)	(:1)
0.01	0.03	1.01	1.00
0.5	0.05	1.00	1.01
1.0	0.05	1.01	1.01
1.5	0.06	1.01	1.01
2.0	0.06	1.01	1.01
2.5	0.06	1.01	1.02
3.0	0.07	1.01	1.02
3.5	0.07	1.02	1.02
4.0	0.07	1.02	1.03
4.5	0.07	1.03	1.03
5.0	0.08	1.03	1.04
5.5	0.08	1.03	1.03
6.0	0.08	1.03	1.03
6.5	0.08	1.01	1.02
7.0	0.08	1.00	1.01
7.5	0.08	1.02	1.01
8.0	0.09	1.04	1.03
8.5	0.09	1.05	1.04
9.0	0.09	1.07	1.06
9.5	0.09	1.08	1.07
10.0	0.10	1.09	1.08
10.5	0.10	1.08	1.07
11.0	0.10	1.07	1.06
11.5	0.10	1.06	1.04
12.0	0.10	1.04	1.03
12.5	0.10	1.03	1.02
13.0	0.10	1.03	1.03
13.5	0.10	1.05	1.05
14.0	0.10	1.06	1.06
14.5	0.10	1.07	1.08
15.0	0.10	1.07	1.08
15.5	0.10	1.07	1.08
16.0	0.10	1.06	1.07
16.5	0.10	1.05	1.06
17.0	0.10	1.04	1.05
17.5	0.10	1.03	1.04
18.0	0.10	1.02	1.03
18.5	0.10	1.02	1.02
19.0	0.10	1.02	1.02
19.5	0.10	1.02	1.03
20.0	0.11	1.03	1.04
20.5	0.11	1.04	1.05
21.0	0.11	1.06	1.07
21.5	0.11	1.08	1.09
22.0	0.12	1.09	1.10
22.5	0.12	1.10	1.12
23.0	0.12	1.10	1.12
23.5	0.12	1.10	1.12
24.0	0.12	1.09	1.10
24.5	0.12	1.10	1.10
25.0	0.12	1.10	1.09
25.5	0.12	1.10	1.09
26.0	0.12	1.11	1.10
26.5	0.12	1.11	1.10
27.0	0.12	1.11	1.11

Typical Performance Curves





Weight: 2.25 grams

Dimensions are in inches [mm]. Tolerances: 2 Pl. $\pm .030$; 3 Pl. $\pm .015$ 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	-55°C to 105°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-65°C to 125° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107
Durability (Mating) - SMA	≥ 500 cycles	
Durability (mating) - SMP	Full Detent ≥ 100 cycles (Engagement Force ≤ 15 lbs, Disengagement Force ≥ 5 lbs)	---
Durability (mating) - SMP	Limited Detent ≥ 500 cycles (Engagement Force ≤ 10 lbs, Disengagement Force ≥ 2 lbs)	---
Durability (mating) - SMP	Smooth Bore Catchers Mitt ≥ 1000 cycles (Engagement Force ≤ 2 lbs, Disengagement Force ≥ 0.5 lbs)	---