



## Adapter

SFR-SM50+

50Ω DC to 18 GHz SMA-Female to SMA-Male

## THE BIG DEAL

- Low Insertion Loss, 0.14 dB typ. up to 18 GHz
- Excellent VSWR, 1.12:1 typ. up to 18 GHz
- Low cost adapters, available from stock
- Tri-metal alloy and gold-plated beryllium copper center connector



Generic photo used for illustration purposes only

Model No.	SFR-SM50+
Case Style	DJ2442-7
Connectors	SMA-Female to SMA-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-SM50+ is a right-angle SMA-Female to SMA-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-SM50+ features Tri-metal alloy body 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 <ul style="list-style-type: none"><li>• 1.12:1 typ. up to 18 GHz</li></ul>	Provides good matching for 50Ω systems and minimizes signal reflections across wide frequency range.
Low insertion loss <ul style="list-style-type: none"><li>• 0.14 dB typ. up to 18 GHz</li></ul>	Provides excellent signal power transmission from input to output.
Tri-metal alloy 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, <ul style="list-style-type: none"><li>• -55 to +100 °C</li></ul>	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 - 18	—	0.14	—	dB
VSWR	DC - 8	—	1.01	1.25	:1
	8 - 12	—	1.07	1.25	
	12 - 18	—	1.09	1.25	

## 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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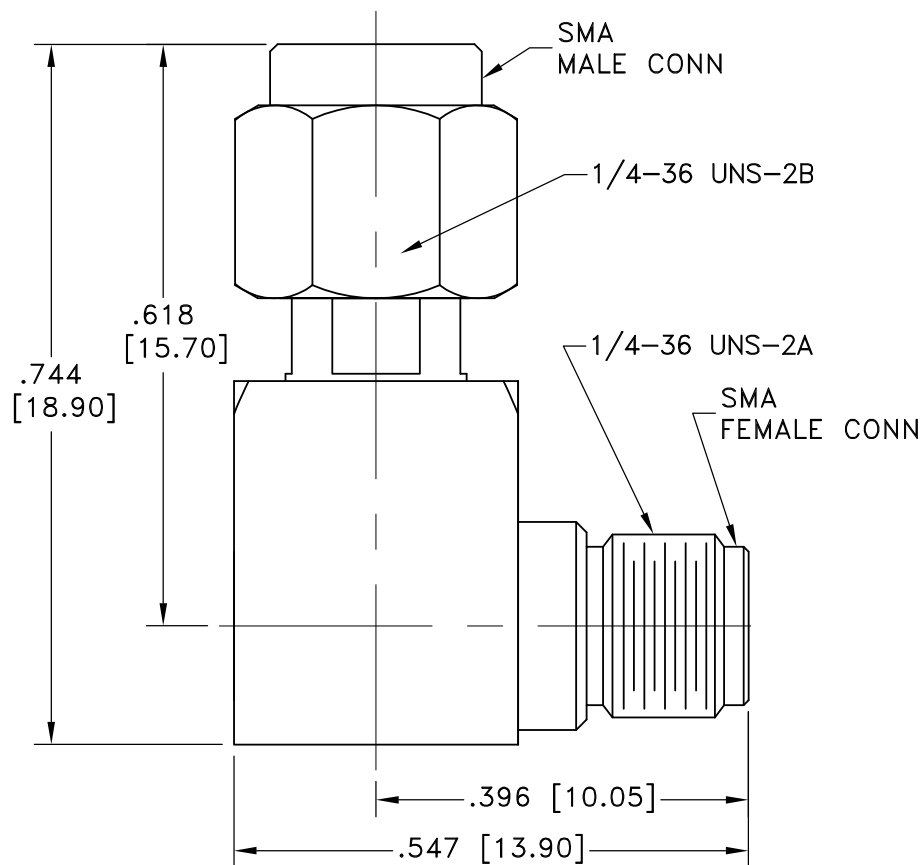
# Adapter

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## OUTLINE DRAWING



Weight: 6.5 grams

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



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## Adapter

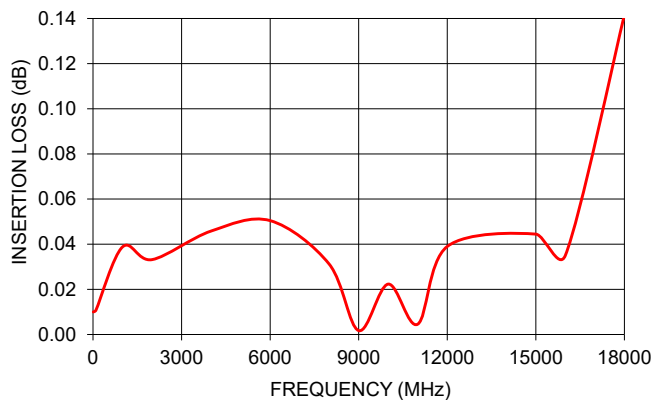
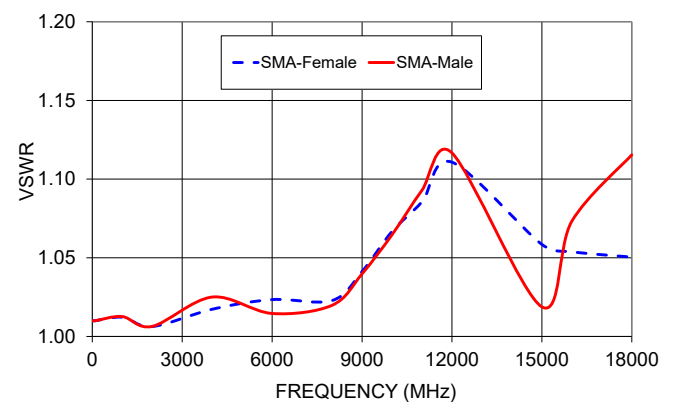
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## TYPICAL PERFORMANCE DATA

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	
		SMA-Female	SMA-Male
10	0.01	1.01	1.01
100	0.01	1.01	1.01
1000	0.04	1.01	1.01
2000	0.03	1.01	1.01
4000	0.05	1.02	1.03
6000	0.05	1.02	1.01
8000	0.03	1.02	1.02
9000	0.00	1.04	1.04
10000	0.02	1.07	1.06
11000	0.00	1.09	1.09
12000	0.04	1.11	1.12
15000	0.04	1.06	1.02
16000	0.04	1.05	1.07
18000	0.14	1.05	1.12

SFR-SM50+  
INSERTION LOSSSFR-SM50+  
VSWR

## 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](http://www.minicircuits.com/terms/viewterm.html)



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