Coaxial Reflectionless **High Pass Filter**

50Ω

4800 to 9000 MHz

VXHF-482M+

The Big Deal

- Match to 50Ω in the stop band, eliminates undesired reflections
- Cascadable
- Temperature stable up to 100°C



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Product Overview

Mini-Circuits' VXHF-482M+ reflectionless filter employs a novel filter topology which absorbs and terminates stop band signals internally rather than reflecting them back to the source. This new capability enables unique applications for filter circuits beyond those suited to traditional approaches. Reflectionless filters eliminate stop band reflections, allowing them to be paired with sensitive devices and used in applications that otherwise require circuits such as isolation amplifiers or attenuators.

Key Features

Feature	Advantages
Easy integration with sensitive reflective components, e.g. mixers, multipliers	Reflectionless filters absorb unwanted signals, preventing reflections back to the source. This reduces generation of additional unwanted signals without the need for extra com- ponents like attenuators, improving system dynamic range.
Enables stable integration of wideband amplifiers	Because reflectionless filters maintain good impedance in the stop band; they can be integrated with high gain, wideband amplifiers without the risk of creating instabilities in these out of band regions.
Operating temperature up to 100°C	Suitable for operation close to high power components.
Connectorized package	The connectorized package is easy to interface with other devices and well suited for test setups.

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Coaxial Reflectionless ligh Pass Filter

500

4800 to 9000 MHz

Features

- Match to 50Ω in the stop band, eliminates undesired reflections
- Cascadable
- Temperature stable up to 100°C
- Protected by US Patents 8,392,495; 9,705,467, additional patent pending
- Protected by China Patent 201080014266.1
- Protected by Taiwan Patent I581494

Applications

- Wi-Fi
- WiMax
- Microwave Radio
- Military & Space

Functional Schematic



Typical Frequency Response

DC F1 F2 F3 F4

INSERTION LOSS (dB)

FREQUENCY (MHz)

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site

for RoHS Compliance methodologies and qualifications

F6

F5

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Model SMA-M/F VXHF-482M+

Electrical Specifications at 25°C

Pa	rameter	F#	Frequency (MHz)	Min.	Тур.	Max.	Unit
Stop Band	Rejection	DC-F1	DC- 2400	16	37	-	dB
		F1-F2	2400 - 3600	14	36	-	dB
	Freq. Cut-Off	F3	4390	-	3.0	-	dB
	VSWR	DC-F1	DC - 2400	-	1.3	-	:1
		F1-F2	2400 - 3600		1.3		:1
Pass Band	Insertion Loss	F4-F6	4800 - 9000	-	1.5	3.0	dB
	VSWR	F4-F5	4800 - 6000	-	2.0	-	:1
		E5-E6	6000 - 9000	-	3.0	-	-1

Absolute Maximum Ratings³

Parameter	Ratings		
Operating Temperature	-55°C to +100°C		
Storage Temperature	-55°C to +100°C		
RF Power Input, Passband (F4-F6) ¹	1.3W at 25°C		
RF Power Input, Stopband (DC-F4) ²	1.6W at 25°C		

Passband rating derates linearly to 0.6W at 100°C ambient
Stopband rating derates linearly to 0.8W at 100°C ambient
Permanent damage may occur if any of these limits are exceeded

ESD rating

Human body model (HBM): Class 2(Pass 2000 V) in accordance with ANSI/ESD STM 5.1-2001

Typical Performance Data at 25°C			
Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	
10	60.75	1.24	
100	50.25	1.25	
300	35.74	1.26	
450	30.56	1.27	
1000	28.54	1.29	
2400	30.21	1.27	
2500	31.98	1.29	
3000	30.01	1.25	
3600	27.73	1.11	
4000	5.76	1.16	
4335	3.00	1.16	
4390	2.78	1.14	
4800	1.90	1.10	
4900	1.79	1.15	
5000	1.70	1.21	
6000	1.55	1.82	
7000	1.62	2.21	
8000	1.36	1.96	
8500	1.08	1.62	
9000	0.78	1.34	

VSWR





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Coaxial Connections

PORT - 1 SMA-Male PORT - 2 SMA-Female

Outline Drawing



Outline Dimensions (inch)

В	D	Е	wt.
.410	1.43	.312	grams
10.41	36.32	7.92	10

Note: Please refer to case style drawing for details

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