Reflectionless

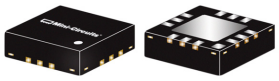
High Pass Filter

XHF-73M+

50Ω 7000 to 16400 MHz

Features

- Match to 50Ω in the stop band, eliminates undesired reflections
- Cascadable
- Excellent Power handling
- Temperature stable, up to 105°C
- Small size, 3 x 3 mm
- Protected by US Patents 8,392,495; 9,705,467, additional patent pending
- Protected by China Patent 201080014266.1
- Protected by Taiwan Patent I581494



CASE STYLE: DQ1225

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500, 1000, 2000

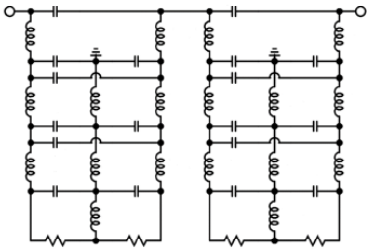
Applications

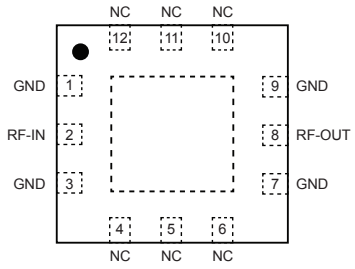
- Wi-Fi
- WiMax
- Microwave Radio
- Military & Space

General Description

Mini-Circuits' XHF-73M+ two-section reflectionless filter employs a patented 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. Traditional filters are reflective in the stop band, sending signals back to the source at 100% of the power level. These reflections interact with neighboring components and often result in inter-modulation and other interferences. 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.

simplified schematic and pad description





Function	Pad Number	Description
RF-IN	2	RF Input Pad
RF-OUT	8	RF Output Pad
GND	1,3,7,9, Paddle	Connected to ground
NC (GND Externally)	4,5,6,10,11,12	No internal connection

Mini-Circuits®

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Electrical Specifications[1] at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Stop Band	Rejection	DC-F[1]	DC-4000	22	38	—	dB
		F[1]-F1	4000-5200	19	30	—	dB
	Frequency Cut-Off	F2	6420	—	3.0	—	dB
	VSWR	DC-F[1]	DC-4000	—	1.2	—	:1
		F[1]-F1	4000-5200	—	1.1	—	
Pass Band	Insertion Loss	F3-F5	7000-16400	—	1.5	2.8	dB
	VSWR	F3-F5	7000-16400	—	1.1	—	:1

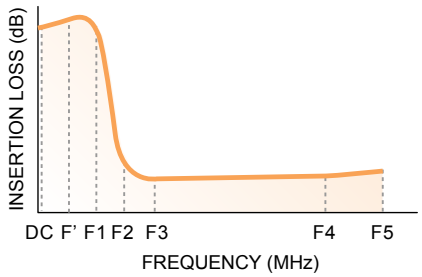
[1] Measured on Mini-Circuits Characterization Test Board TB-844-73MC+

Absolute Maximum Ratings[4]

Parameter	Ratings
Operating Temperature	-55°C to +105°C
Storage Temperature	-65°C to +150°C
RF Power Input, Passband (F3-F5) [2]	1.3W at 25°C
RF Power Input, Stopband (DC-F3)[3]	1.3W at 25°C

[2] Passband rating derates linearly to 0.6W at 105°C ambient
[3] Stopband rating derates linearly to 0.6W at 105°C ambient
[4] Permanent damage may occur if any of these limits are exceeded.

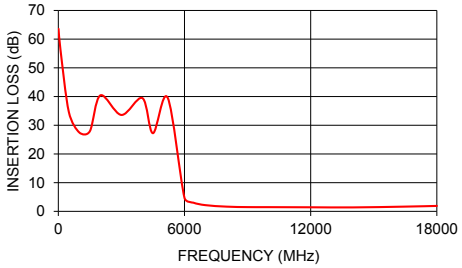
SPECIFICATION DEFINITION



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	63.59	1.17
100	56.47	1.17
500	34.62	1.22
1000	27.46	1.30
1500	27.92	1.34
2000	40.42	1.25
3000	33.59	1.13
4000	39.45	1.22
4500	27.23	1.12
5200	39.60	1.18
6000	4.69	1.03
6420	3.03	1.10
7000	2.15	1.13
8000	1.64	1.06
9000	1.48	1.12
10000	1.46	1.13
12000	1.42	1.27
14000	1.37	1.04
16400	1.63	1.44
18000	1.89	1.67

XHF-73M+
INSERTION LOSS



XHF-73M+
VSWR