



(LTCC) COAXIAL

# High Pass Filter

## VHF-3500A+

50Ω 3900 to 7000 MHz SMA Male/Female

### KEY FEATURES

- Rugged Unibody Construction, Small Size
- 5 Sections
- Temperature Stable
- Excellent Power Handling, 7 W
- Low Cost

### APPLICATIONS

- Sub-Harmonic Rejection
- Transmitters/Receivers
- Lab Use

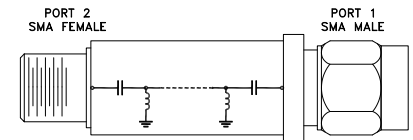
### PRODUCT OVERVIEW

VHF-3500A+ is a 50Ω high pass filter built in rugged unibody construction. Covering a passband of 3900 to 7000 MHz, this model offers good matching within the passband and good rejection in the stopband. It can handle a high power of 7W with a wide operating temperature range from -55°C to +100°C.



Generic photo used for illustration purposes only

### FUNCTIONAL DIAGRAM



### ELECTRICAL SPECIFICATIONS<sup>1</sup> AT +25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Units
Pass Band	Insertion Loss	F3-F4	3900 - 4000	—	1.1	2	dB
		F4-F5	4000 - 7000	—	1.0	1.6	
	Return Loss	F3-F5	3900 - 4000	—	13	—	dB
		F4-F5	4000 - 7000	—	13	—	
Stop Band	Rejection	DC-F1	DC - 2800	20	31	—	dB
		F1-F2	2800 - 2900	20	29	—	
	Freq. Cut-Off <sup>2</sup>	Fc	3500	—	3	—	dB

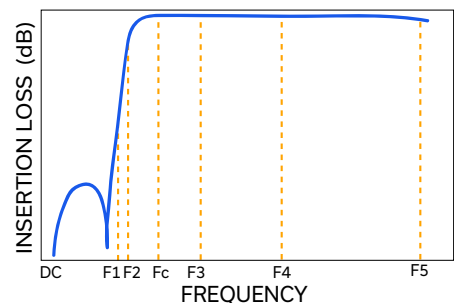
1. This component should not be used as a DC-block. In applications where DC voltage and/or current is present at either the input or output ports, external DC blocking capacitors are required.  
 2. Typical variation ±5%

### ABSOLUTE MAXIMUM RATINGS<sup>3</sup>

Parameter	Ratings
Operating Temperature	-55°C to +100°C
Storage Temperature	-55°C to +100°C
Input Power <sup>4</sup>	7 W at +25°C

3. Permanent damage may occur if any of these limits are exceeded.  
 4. Power rating applies only to signals within the passband. Power rating above +25°C operating temperature decreases linearly to 1.3 W at +125°C.

### TYPICAL FREQUENCY RESPONSE



REV. OR  
 ECO-019841  
 VHF-3500A+  
 EDU4890  
 URJ  
 240627





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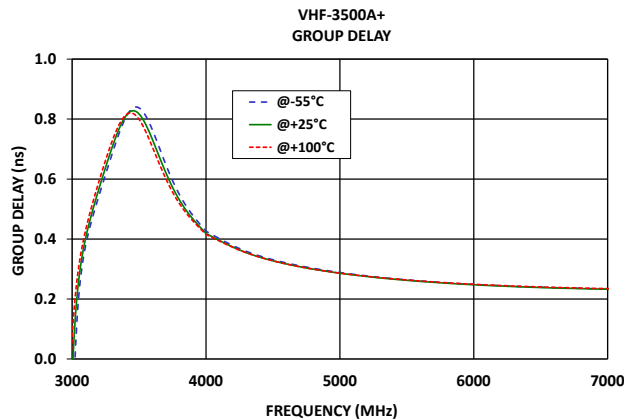
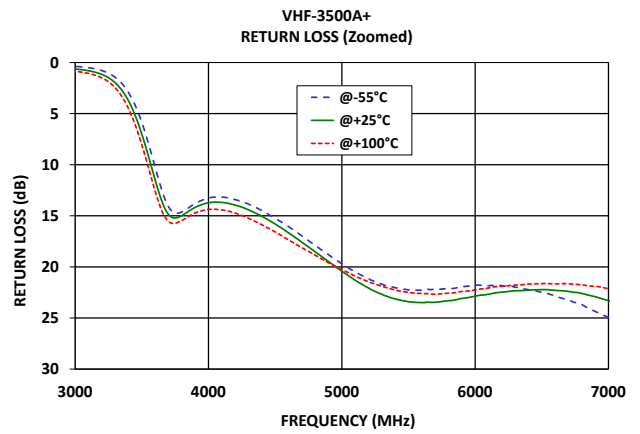
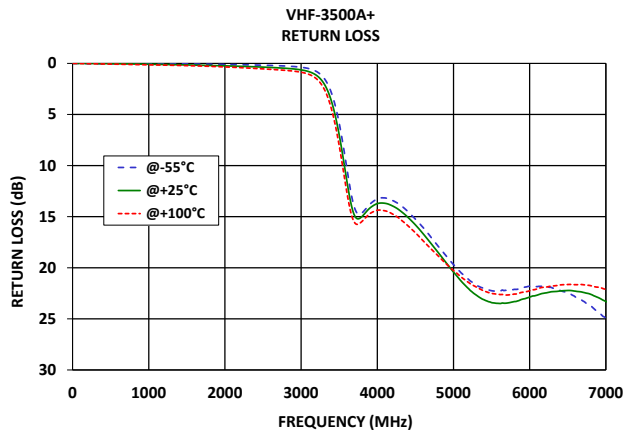
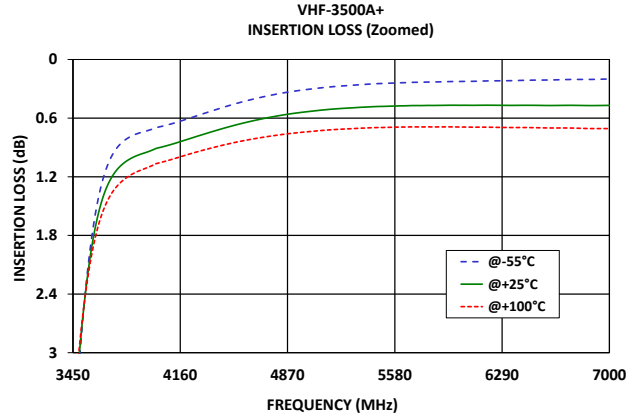
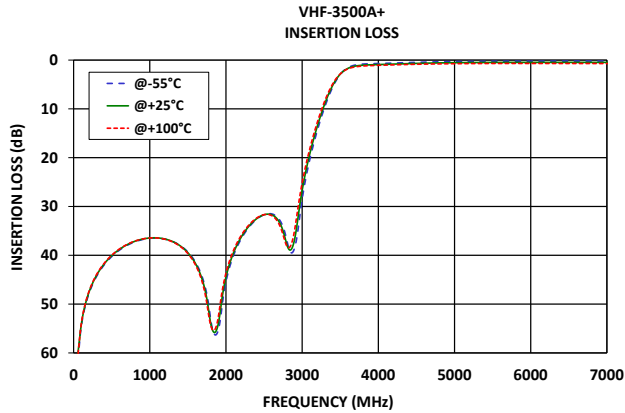
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## VHF-3500A+

Mini-Circuits

50Ω 3900 to 7000 MHz SMA Male/Female

### TYPICAL PERFORMANCE GRAPHS





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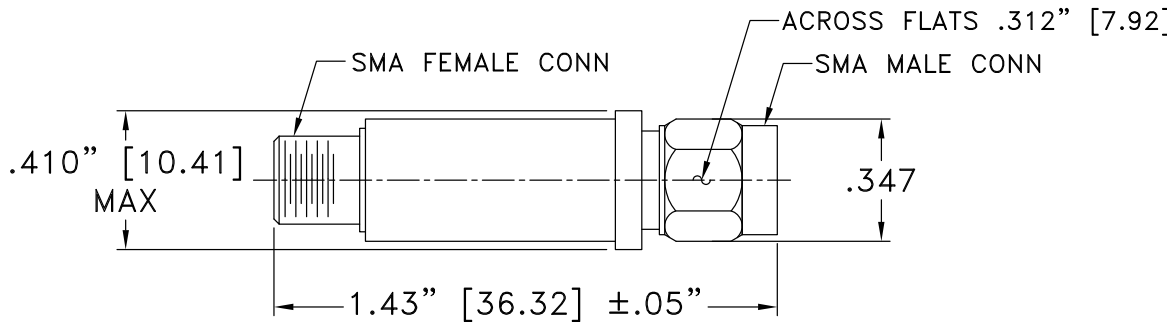
Mini-Circuits

50Ω    3900 to 7000 MHz    SMA Male/Female

### CONNECTOR DESCRIPTION

Function	Functionality	Connector
RF1	Port-1	SMA-Male
RF2	Port-2	SMA-Female

### CASE STYLE DRAWING



Unit weight: 10.0grams

Dimensions are in inches (mm). Tolerances: 2 Pl. ±.04"; 3 Pl. ±.30"

**PRODUCT MARKING\*:** VHF-3500A+

\*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	FF704
RoHS Status	Compliant
Environmental Ratings	ENV113

### 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-Circuits' 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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