



CAVITY COAXIAL

# Bandpass Filter

## ZVBP-8500-S+

50Ω

8000 to 9000 MHz SMA Female

### KEY FEATURES

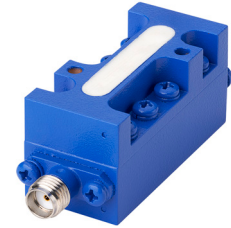
- Low Insertion Loss, 0.4 dB Typ.
- Good Return Loss, 18 dB Typ.
- High Rejection, 68 dB Typ.
- Stopband up to 17 GHz
- Power Handling 10 Watts

### APPLICATIONS

- Test and Measurement
- Aerospace and Defense

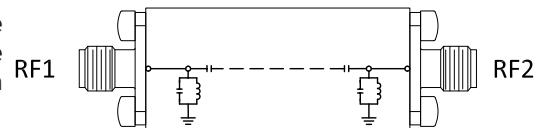
### PRODUCT OVERVIEW

Mini-Circuits' ZVBP-8500-S+ is a coaxial cavity filter designed by implementing resonant structures with very high Q and are ideal for narrow-band, high-selectivity applications. Mini-Circuits' coaxial cavity filters feature a special protective assembly to prevent accidental de-tuning that would otherwise require expensive replacement or return to factory for re-tuning. Precise machining allows realization of cavity filters with small form factors for applications where size is critical.



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
Passband	Center Frequency	—	—	—	8500	—	MHz
	Insertion Loss	F1-F2	8000 - 9000	—	0.4	0.7	dB
	Return Loss	F1-F2	8000 - 9000	14	18	—	dB
Stop Band, Lower	Rejection	DC-F3	DC - 3000	60	66	—	dB
		F3-F4	3000 - 6400	35	41	—	
Stop Band, Upper	Rejection	F5-F6	10250 - 12000	35	41	—	dB
		F6-F7	12000 - 17000	60	68	—	

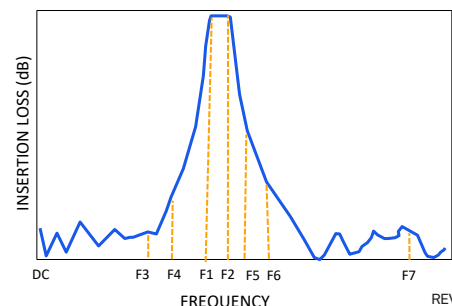
1. This filter is bi-directional RF1 and RF2 ports may be interchanged, see S-Parameters for actual performance.

### ABSOLUTE MAXIMUM RATINGS<sup>2,3</sup>

Parameter	Ratings
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
Input Power <sup>4</sup>	10 W max. at +25°C

2. Permanent damage may occur if any of these limits are exceeded.  
 3. Input and output ports are DC short to ground.  
 4. Power rating applies only to signals within the passband.

### TYPICAL FREQUENCY RESPONSE AT +25°C

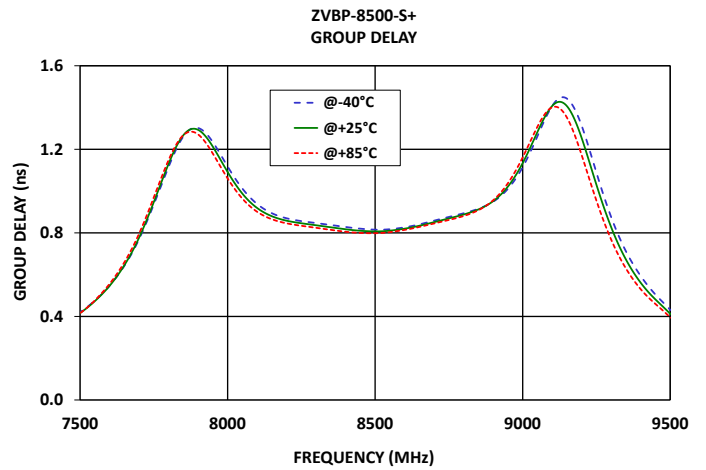
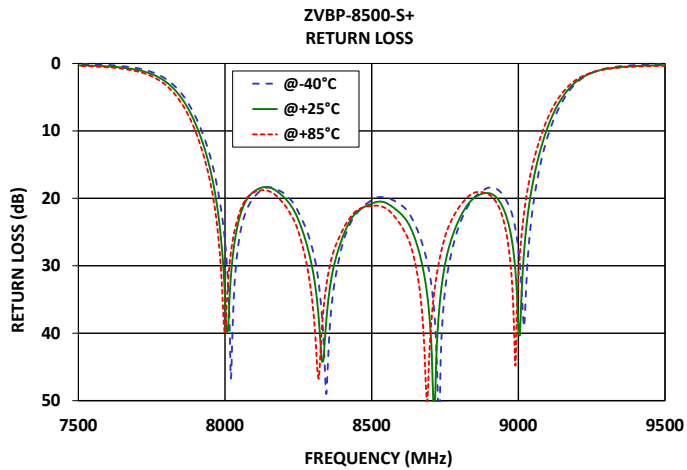
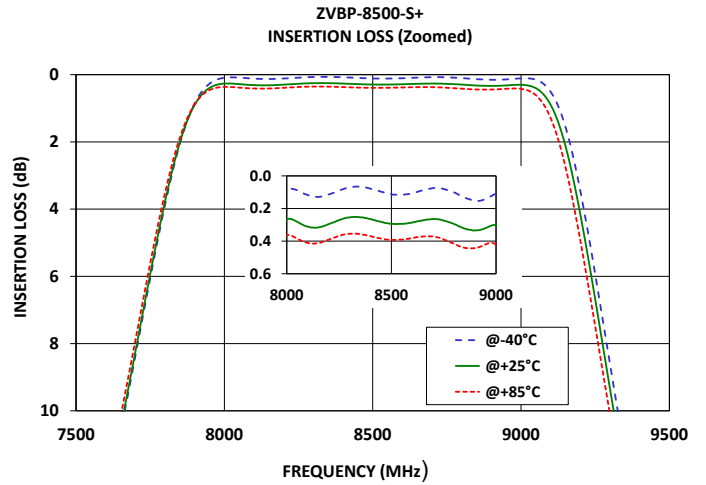
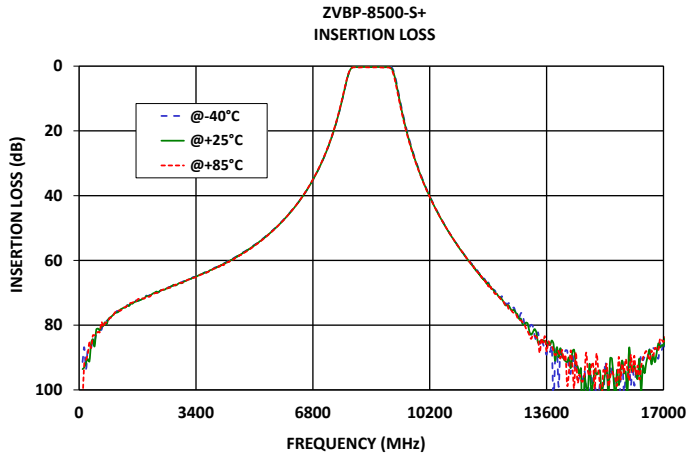


REV. OR  
 ECO-026012  
 ZVBP-8500-S+  
 EDU4946  
 URJ  
 250626





### TYPICAL PERFORMANCE GRAPHS





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Mini-Circuits

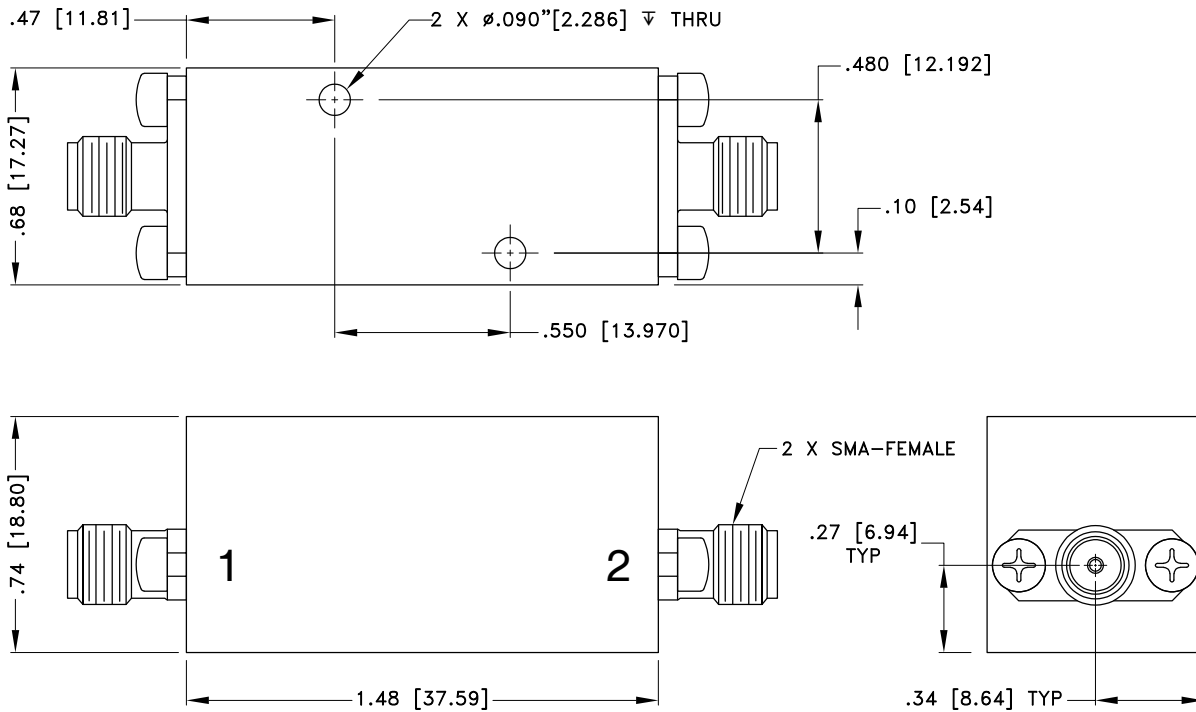
50Ω

8000 to 9000 MHz SMA Female

### CONNECTOR DESCRIPTION

Function	Marking on Unit	Connector
RF1 <sup>1</sup>	1	SMA Female
RF2 <sup>1</sup>	2	SMA Female

### CASE STYLE DRAWING



Unit weight : 35 grams.

Dimensions are in inches (mm). Tolerances: 2 Pl. + .100; 3 Pl. + .015

### PRODUCT MARKING\*: ZVBP-8500-S+

\*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	<p>Data</p> <p>Graphs</p> <p>S-Parameter (S2P Files) Data Set (.zip file)</p>
Case Style	AAU3648
RoHS Status	Compliant
Environmental Ratings	ENV46

### 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)

