



CAVITY COAXIAL

Bandpass Filter

ZVBP500W-2450N+

Mini-Circuits

50Ω 2400 to 2500 MHz N Female

KEY FEATURES

- Low Insertion Loss, 0.12 dB Typ.
- Good Return Loss, 23 dB Typ.
- High Rejection, 60 dB Typ.
- Stopband up to 5000 MHz
- High Power Handling: 500 Watts



Generic photo used for illustration purposes only

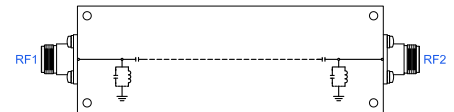
APPLICATIONS

- Industrial
- Telecom
- Test and Measurement
- Aerospace and defense

PRODUCT OVERVIEW

Mini-Circuits' ZVBP500W-2450N+ 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.

FUNCTIONAL DIAGRAM



ELECTRICAL SPECIFICATIONS AT +25°C

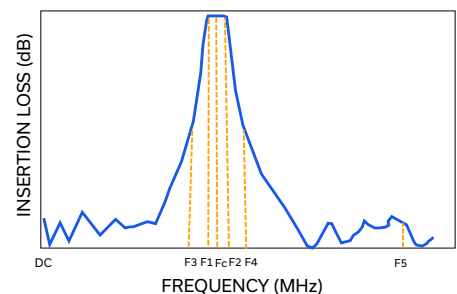
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Units
Passband	Center Frequency	Fc	—	—	2450	—	MHz
	Insertion Loss	F1-F2	2400 - 2500	—	0.12	0.4	dB
	Return Loss	F1-F2	2400 - 2500	16	23	—	dB
Stopband, Lower	Rejection	DC-F3	DC - 2050	52	57	—	dB
Stopband, Upper	Rejection	F4-F5	2850 - 5000	54	60	—	dB

ABSOLUTE MAXIMUM RATINGS^{1,2}

Parameter	Ratings
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
Input Power ³	500 W max. at +25°C

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

TYPICAL FREQUENCY RESPONSE





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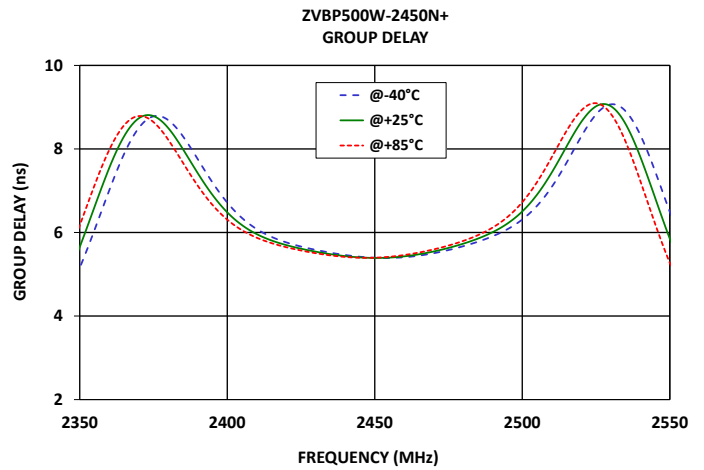
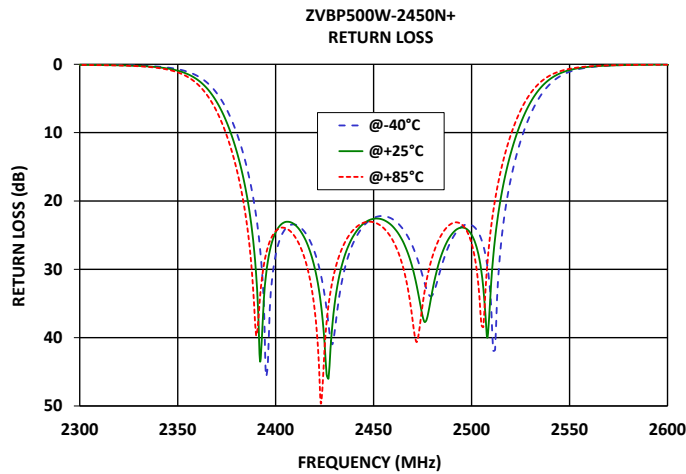
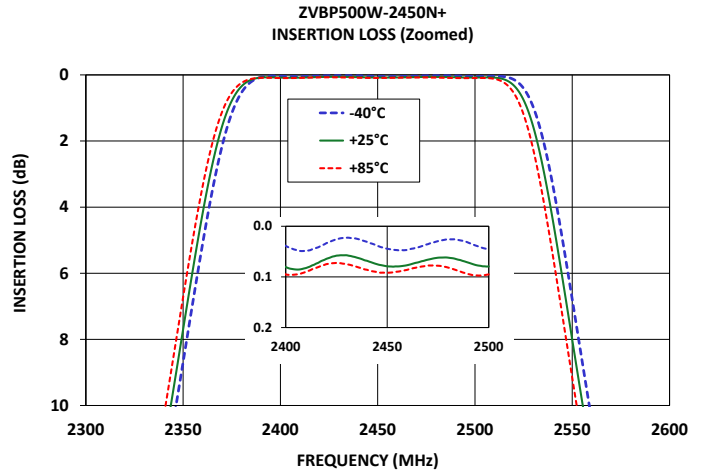
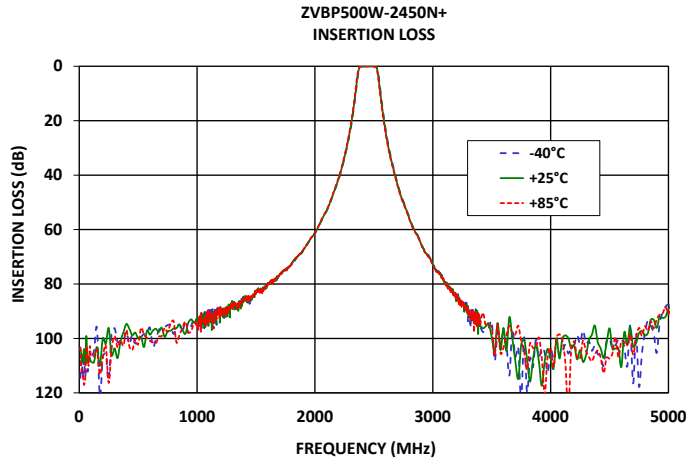
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TYPICAL PERFORMANCE GRAPHS





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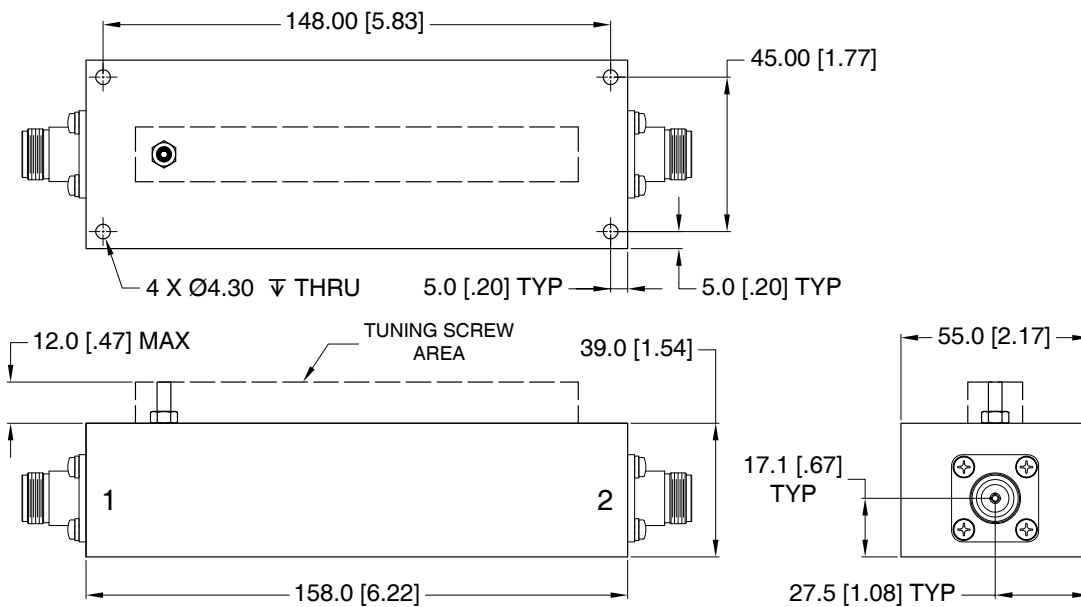
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CONNECTOR DESCRIPTION

Function	Connector
RF1 ⁴	N Female
RF2 ⁴	N Female

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

CASE STYLE DRAWING



Dimensions are in mm (inches). Tolerances: 1 Pl. ± 1.5 (0.06); 2 Pl. ± 0.38 (0.015)

PRODUCT MARKING*: ZVBP500W-2450N+

*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	BBD3778
RoHS Status	Compliant
Environmental Ratings	ENV77T1

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

