



Mini-Circuits

(CERAMIC RESONATOR) COAXIAL

# Bandpass Filter

**ZCBP12-550-S+**

50Ω 540 to 560 MHz SMA Female

## KEY FEATURES

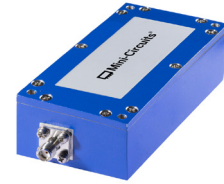
- Narrow Band Design with Fast Roll-off
- High Rejection, 73 dB Typ.
- Good Insertion Loss, 1.9 dB Typ.

## APPLICATIONS

- Satellite Communications
- Broadcasting
- Traffic Control

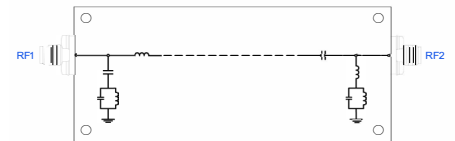
## PRODUCT OVERVIEW

All our coaxial-ceramic resonator filters are built with rugged construction. Excellent repeatability across units is achieved through precise tuning and process control.



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	—	—	—	550	—	MHz
	Insertion Loss	F1-F2	540 - 560	—	1.9	2.5	dB
	Return Loss	F1-F2	540 - 560	10	17	—	dB
Stopband, Lower	Rejection	DC-F3	DC - 480	65	73	—	dB
		F3-F4	480 - 527	40	47	—	
Stopband, Upper	Rejection	F5-F6	573 - 620	40	45	—	dB
		F6-F7	620 - 1000	60	67	—	

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.

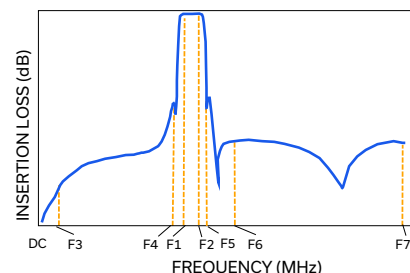
## ABSOLUTE MAXIMUM RATINGS<sup>2</sup>

Parameter	Ratings
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
Input Power <sup>3</sup>	6 W at +25°C

2. Permanent damage may occur if any of these limits are exceeded.

3. Power rating applies only to signals within the passband. Power rating above +25°C operating temperature decreases linearly to 2 W at +85°C.

## TYPICAL FREQUENCY RESPONSE



Mini-Circuits

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REV OR  
ECO-027770  
ZCBP12-550-S+  
EDU4487  
URJ  
251126

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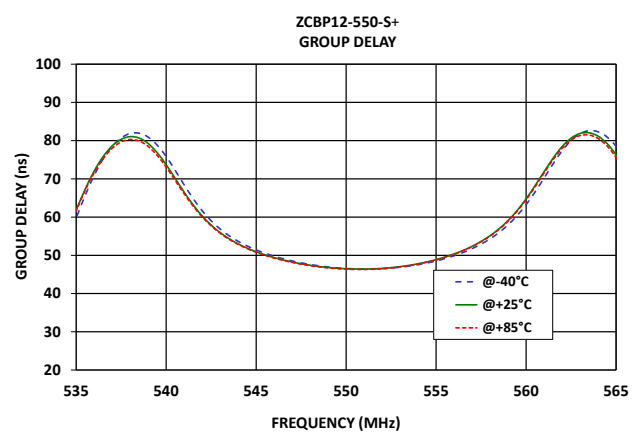
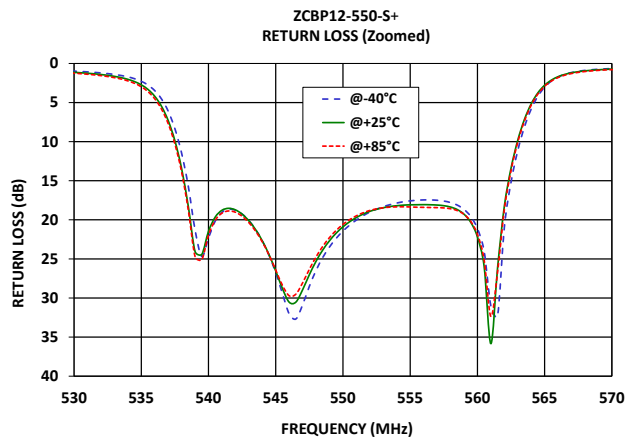
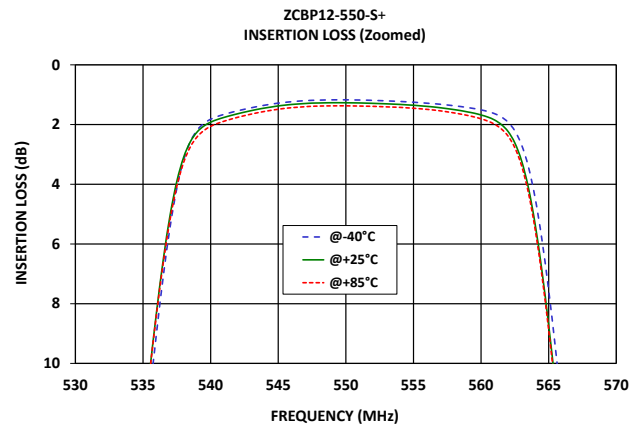
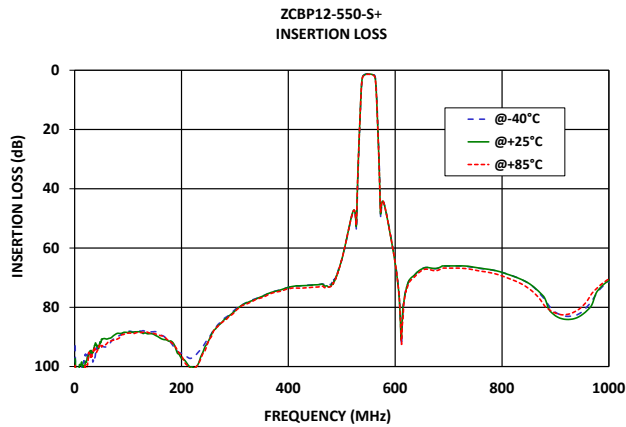
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## TYPICAL PERFORMANCE GRAPHS



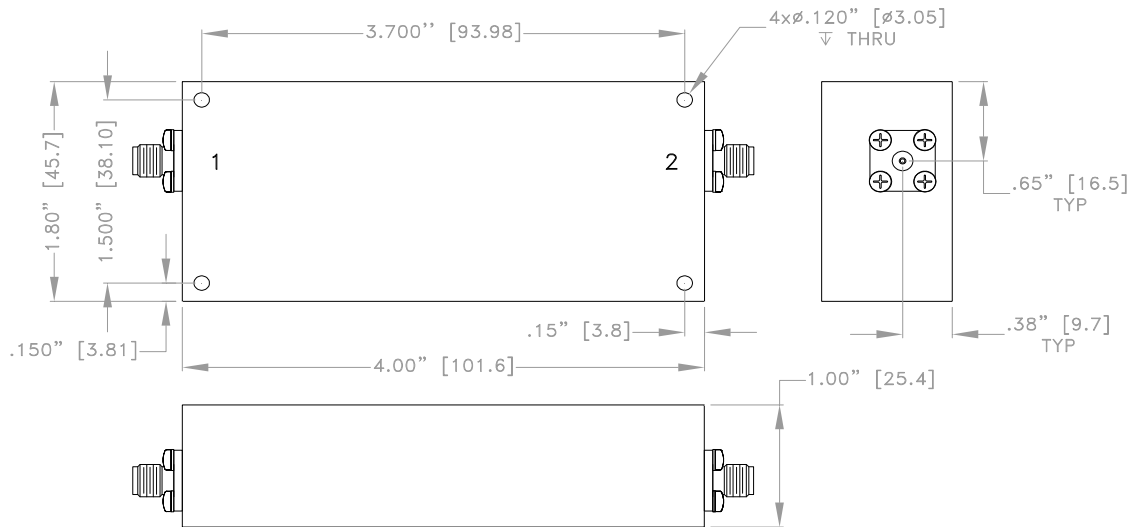


## CONNECTOR DESCRIPTION

Function	Connector
RF1 <sup>4</sup>	SMA Female
RF2 <sup>4</sup>	SMA Female

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

## CASE STYLE DRAWING



Unit Weight: 265 grams.

Dimensions are in inches [mm]. Tolerances: 2 Pl.  $\pm .100$  [2.540]; 3 Pl.  $\pm .015$  [0.381]

## PRODUCT MARKING\*: ZCBP12-550-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	Data
	Graphs
	S-Parameter (S2P Files) Data Set (.zip file)
Case Style	BBC3340
RoHS Status	Compliant
Environmental Ratings	ENV125

## 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)

