



Mini-Circuits

(CAVITY) COAXIAL

Diplexer

ZVDP-902-252-S+

50Ω (902 to 928, 2400-2500) MHz SMA Female

KEY FEATURES

- Low Insertion Loss, 0.4 dB Typ.
- Good Return Loss, 20 dB Typ.
- High Rejection, 90 dB Typ.
- Power Handling 75 W

APPLICATIONS

- Test and Measurement
- Electronic Counter Measures
- Bluetooth ISM Band

PRODUCT OVERVIEW

Mini-Circuits' ZVDP-902-252-S+ is a coaxial cavity diplexer designed by implementing resonant structures with very high Q and are ideal for narrow-band, high-selectivity applications.

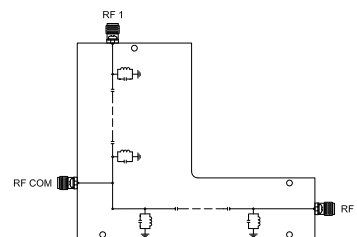
Bandpass, diplexer, and multiplexer designs can be realized with this technology with passband, up to 50GHz, and stopband width greater than 3x cut-off frequency.

Mini-Circuits' coaxial cavity filters feature a special protective assembly to prevent accidental de-tuning that would otherwise require expensive replacement or return to the factory for re-tuning. Precise machining allows the 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 AT +25°C

Parameter		Function (Port)	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	Band Pass 1 (RF COM-RF1)	902 - 928	—	0.5	1.0	dB
		Band Pass 2 (RF COM-RF2)	2400 - 2500	—	0.4	1.0	
	Return Loss	Band Pass 1 (RF1)	902 - 928	14	18	—	dB
		Band Pass 2 (RF2)	2400 - 2500	14	20	—	
		Common (COM)	902 - 928 2400 - 2500	14 14	18 20	— —	
Stop Band	Rejection	Band Pass 1 (RF COM-RF1)	DC - 830	27	33	—	dB
			1000 - 1200	28	34	—	
			1200 - 3000	50	62	—	
		Band Pass 2 (RF COM-RF2)	DC - 1800	70	90	—	
			1800 - 2300	25	31	—	
			2600 - 3000 3000 - 6000	34 70	41 90	— —	

ABSOLUTE MAXIMUM RATINGS¹

Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +100 °C
Input Power (RF COM) ²	75W @25degC
Input Power (RF1) ²	75W @25degC
Input Power (RF2) ²	75W @25degC

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

2. Power rating applies only to signals within the passband.

REV. OR
ECO-022059
EDU4679
ZVDP-902-252-S+
URJ
240611





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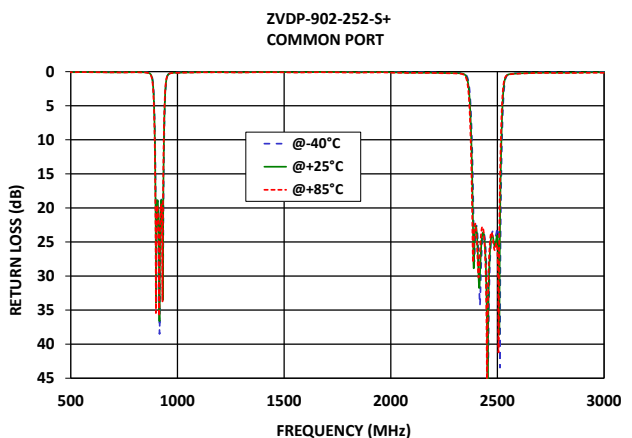
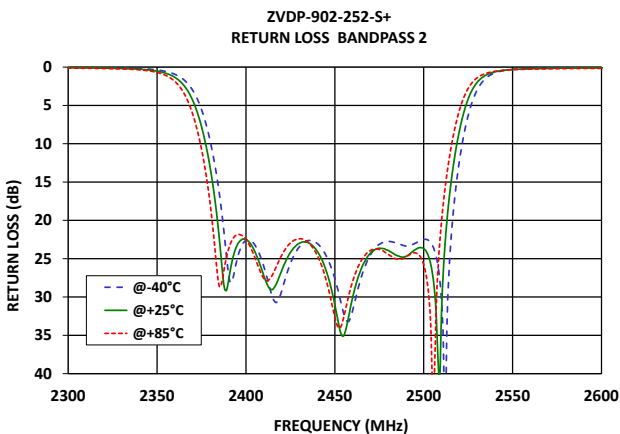
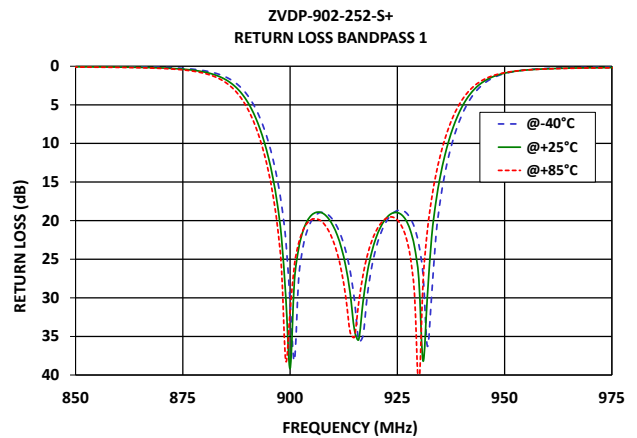
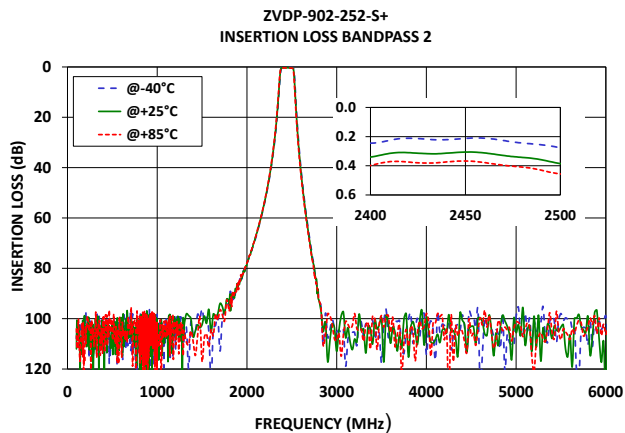
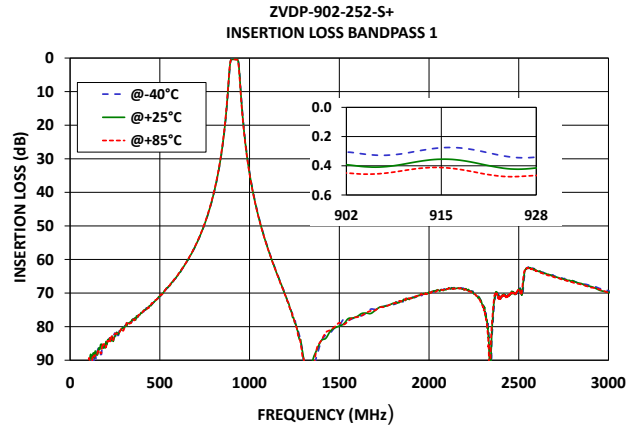
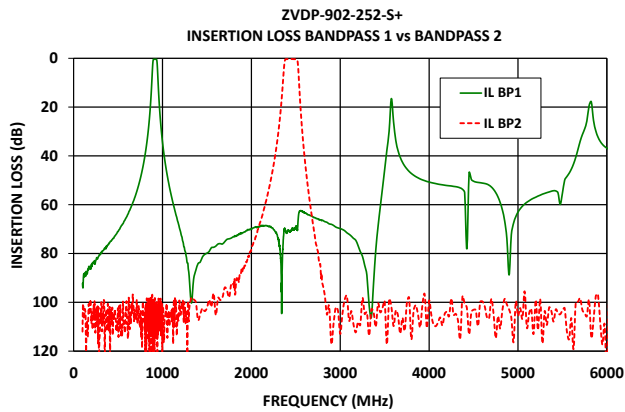
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TYPICAL PERFORMANCE GRAPHS





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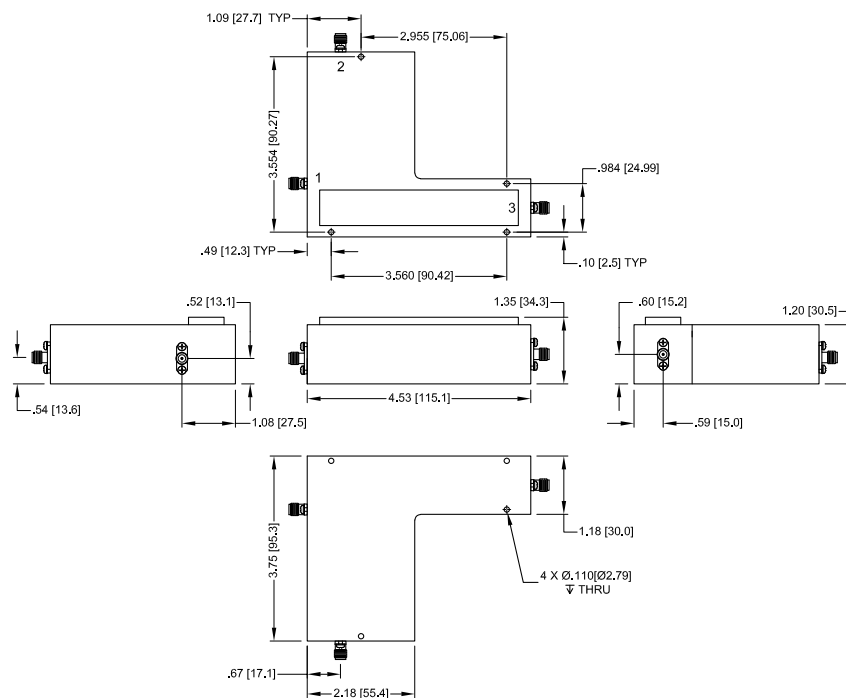
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CONNECTOR DESCRIPTION

Function	Marking on Unit	Connector
RF COM ¹	COM	SMA Female (Port-1)
RF1 ¹	CH1	SMA Female (Port-2)
RF2 ¹	CH2	SMA Female (Port-3)

CASE STYLE DRAWING



Unit Weight: 320 Grams.
Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .100$; 3 Pl. $\pm .015$

PRODUCT MARKING*: ZVDP-902-252-S+

*Marking may contain other features or characters for internal lot control.





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ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD

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Performance Data & Graphs	Data
	Graphs
	S-Parameter (S3P Files) Data Set (.zip file)
Case Style	AAF3613
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



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