(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

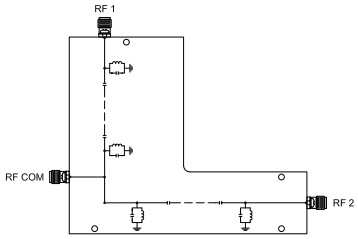
APPLICATIONS

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



Generic photo used for illustration purposes only

FUNCTIONAL DIAGRAM



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.

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	14	18	—	
			2400 - 2500	14	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	34	41	—	
			3000 - 6000	70	90	—	

ABSOLUTE MAXIMUM RATINGS[1]

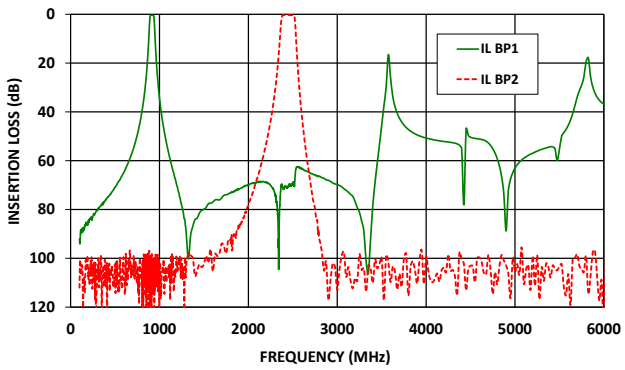
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +100 °C
Input Power (RF COM)[2]	75W @25degC
Input Power (RF1)[2]	75W @25degC
Input Power (RF2)[2]	75W @25degC

1. Permanent damage may occur if any of these limits are exceeded.
2. Power rating applies only to signals within the passband.

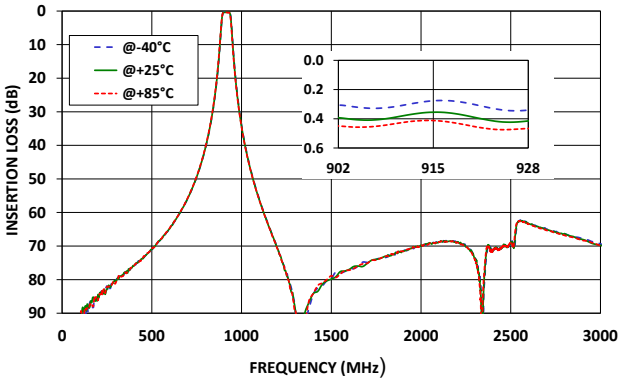
REV. OR
ECO-022059
EDU4679
ZVDP-902-252-S+
URJ
240611

TYPICAL PERFORMANCE GRAPHS

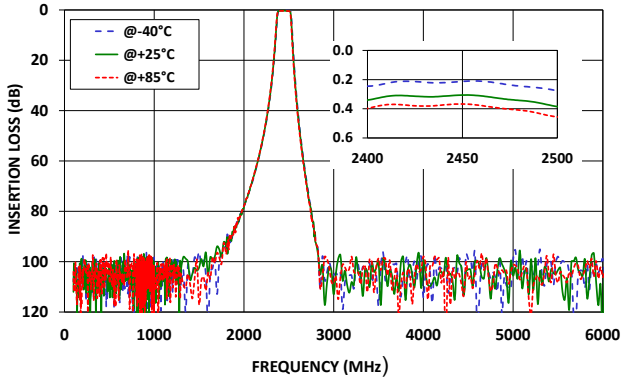
ZVDP-902-252-S+
INSERTION LOSS BANDPASS 1 vs BANDPASS 2



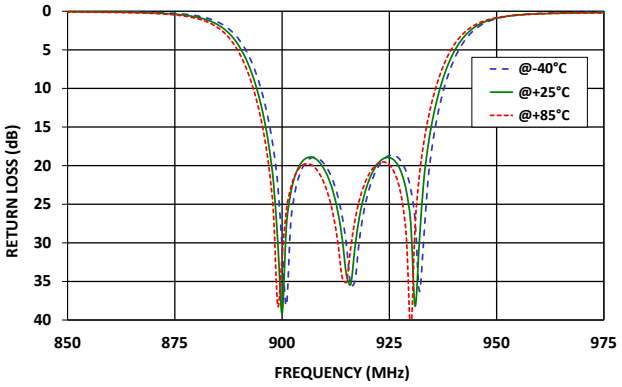
ZVDP-902-252-S+
INSERTION LOSS BANDPASS 1



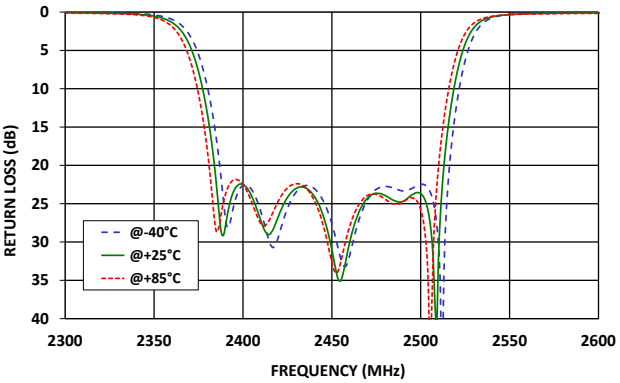
ZVDP-902-252-S+
INSERTION LOSS BANDPASS 2



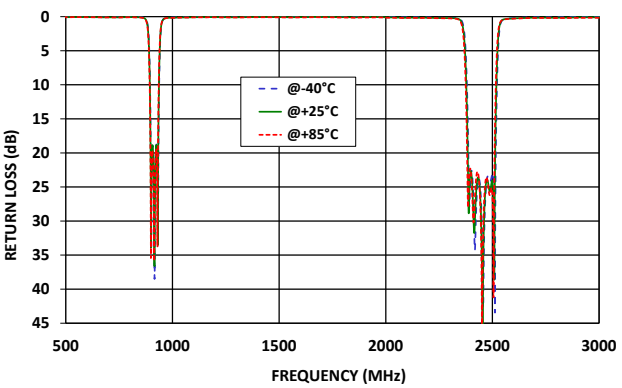
ZVDP-902-252-S+
RETURN LOSS BANDPASS 1



ZVDP-902-252-S+
RETURN LOSS BANDPASS 2



ZVDP-902-252-S+
COMMON PORT



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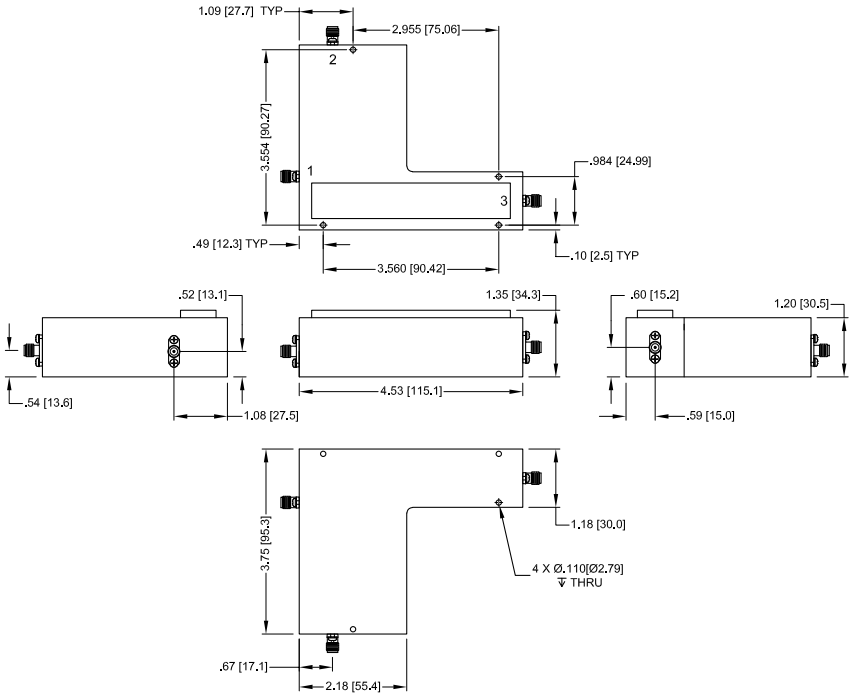
CONNECTOR DESCRIPTION

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. ± .100; 3 Pl. ± .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 CLICK HERE

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