SAS-933-11010-F1

WR-10 Linear to Circular Polarizer, 75-110 GHz

SAS-933-11010-F1 is a W band, linear to circular polarizer that operates from 75 GHz to 110 GHz. The polarizer offers a typical insertion loss of 0.3 dB, typical axial ratio of 1.2, and a typical return loss of 20 dB. The polarizer is fixed and can be used for either right-handed or left-handed polarization based on the direction of the input signal. The polarizer is often combined with Eravant's rectangular to circular waveguide transition (**SWT-10110-SB**) or **(SWT-12110-SB)** and WR-10 conincal antenna (**SAC-2309-110-S2**) for various system applications.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	75 GHz		110 GHz
Insertion Loss		0.3 dB	
Axial Ratio		1.2	
Return Loss		20 dB	
Specification Temperature		+25°C	
Operating Temperature	-40°C		-85°C

Mechanical Specifications:

Item	Specification
RF Ports	Ø0.110" Waveguide with UG-387/U-M Anti-Cocking Flange
Material	Brass
Finish	Gold Plated
Weight	0.07 Oz
Outline	AS-FWB-110-A

ECCN

EAR99

FEATURES

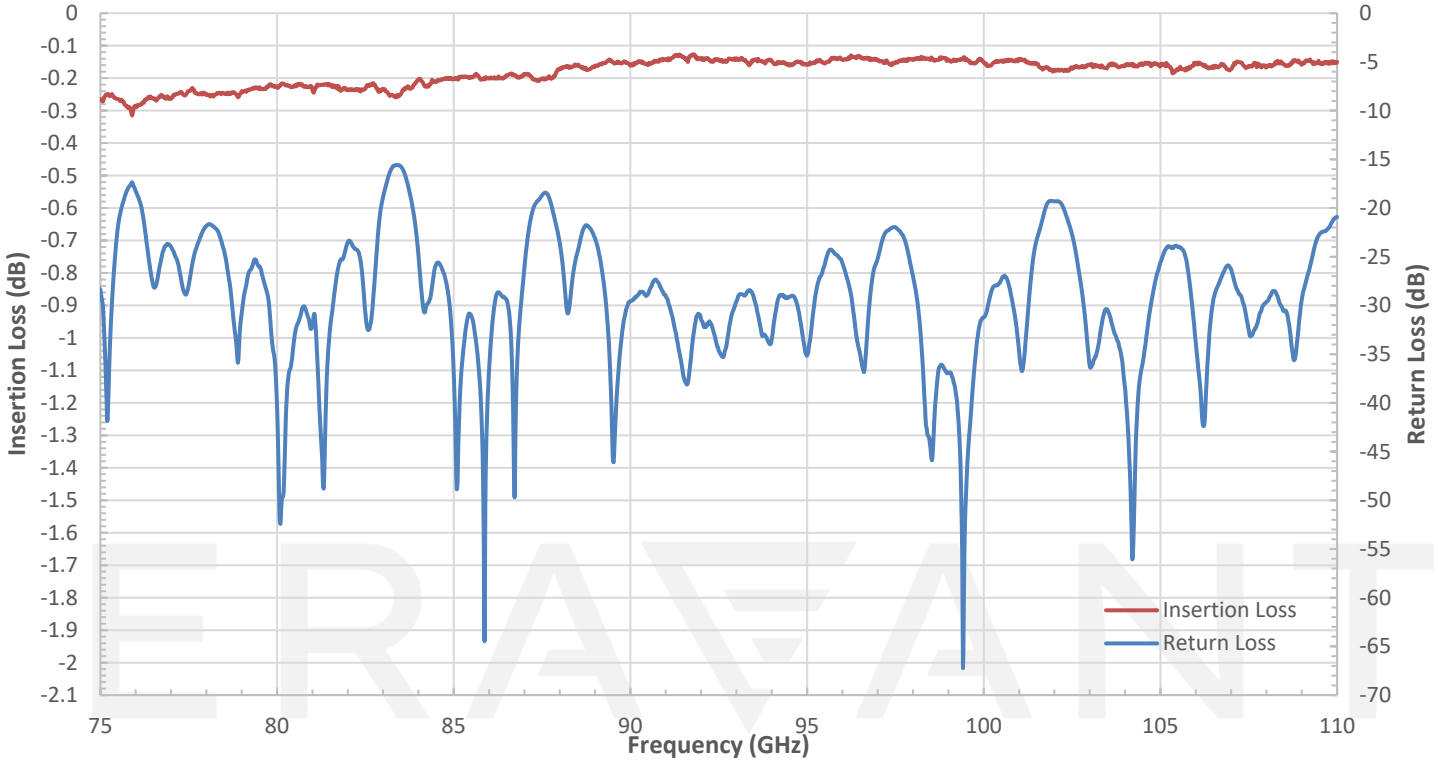
- Broad Band Coverage
- Compact Size
- Good Axial Ratio

APPLICATIONS

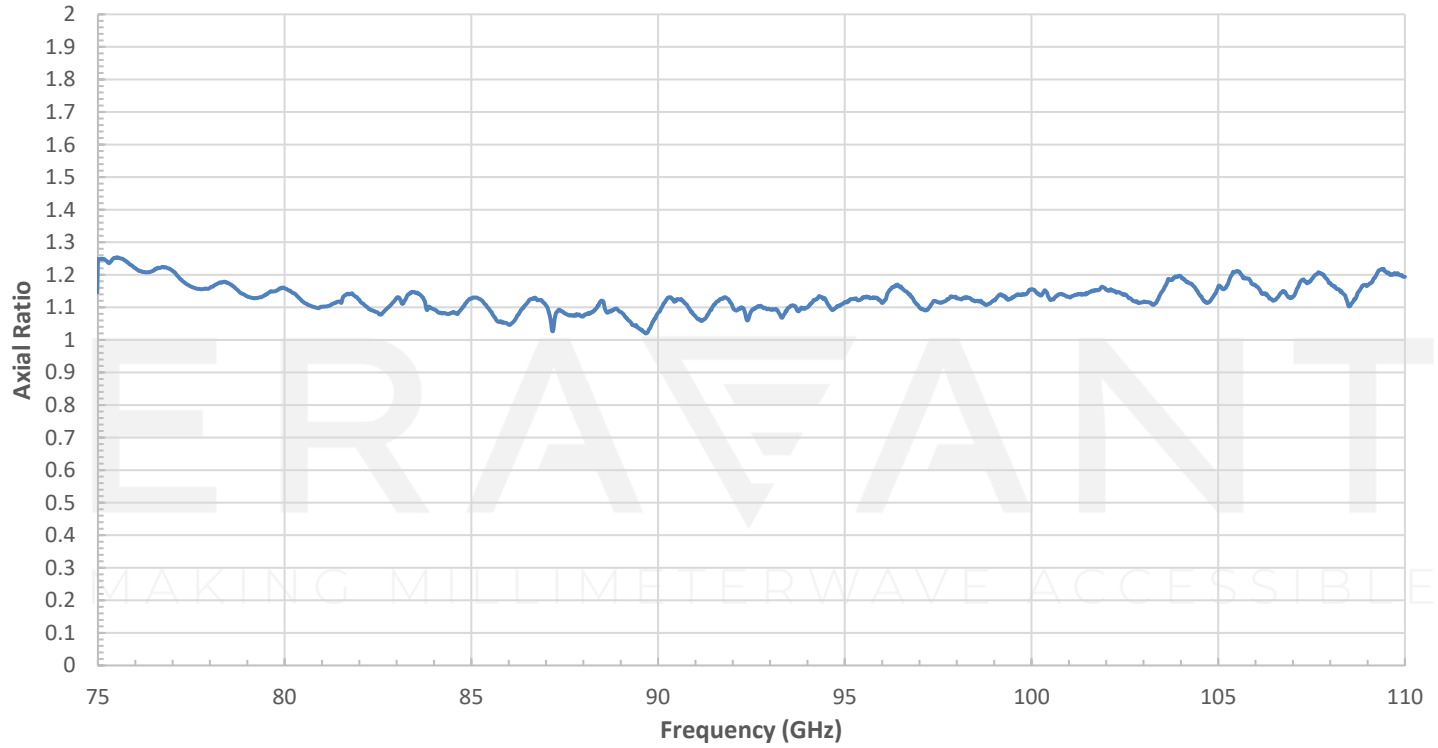
- Antenna Ranges
- Waveguide Polarization Selection
- Communication Systems

SUPPLEMENTAL DETAILS

Measured Insertion Loss, Return Loss Vs Frequency

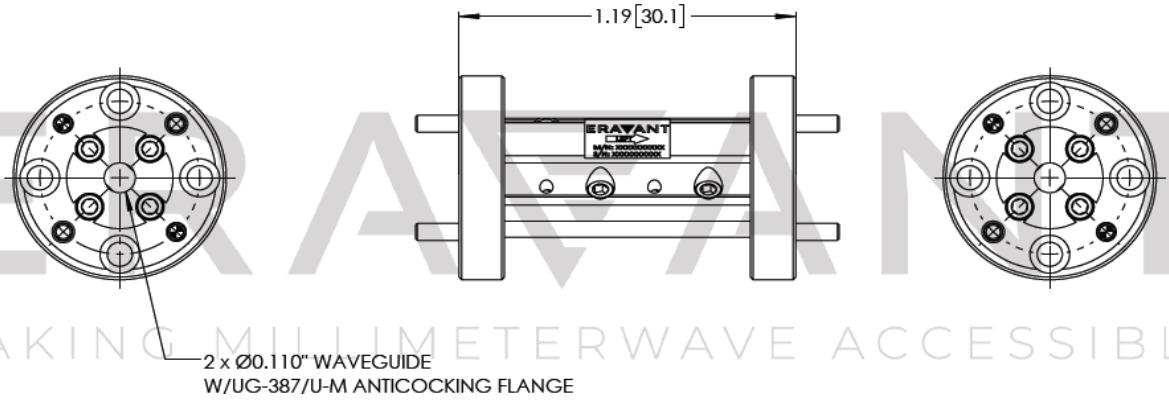


Measured Axial Ratio vs Frequency



Mechanical Outline:

Unless otherwise specified, all dimensions are in inches [millimeters])



NOTE:

- Test data provided is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Any foreign objects in the antenna will cause performance degradation and possible device damage.

LHCP and RHCP Polarization Configuration Notes and Diagram:

- The polarizer's product label indicates the direction of **Left-Handed Circular Polarization (LHCP)**.
- An example configuration diagram is provided below. The diagram indicates the input and output ports and the orientation in which the polarizer is to be attached to the rest of the components to obtain an LHCP signal at the output port.
- The polarizer can be configured to obtain a **Right-Handed Circular Polarized (RHCP)** signal at the output port by reversing the input and output ports as shown in the second diagram.