

## Coaxial Hybrid Coupler, 1 to 18 GHz, 180 Degrees

### Description:

**Model SCZ-1031831518-SFSF-43** is a coaxial 180-degree hybrid coupler that covers the frequency range of 1 to 18 GHz. The nominal coupling is 3 dB and the typical insertion loss is 2.6 dB. The typical isolation of the coupler is 15 dB. The RF connectors of the coupler are female SMA connectors. The power handling of the coupler is 50 watts maximum. Other configurations, such as different connectors for input and output, are available under different model numbers.



### Features:

- Broad Band
- Low Insertion Loss
- Flat Coupling Level

### Applications:

- Test Labs
- Instrumentations
- Sub-assemblies

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	1 GHz		18 GHz
Insertion Loss		2.6 dB	
Isolation		15 dB	
Coupling		3 dB	
Return Loss		14 dB	
Amplitude Unbalance		±1.0 dB	
Phase Unbalance		±11°	
Impedance		50 Ω	
Power Handling			50 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-45 °C		+85 °C

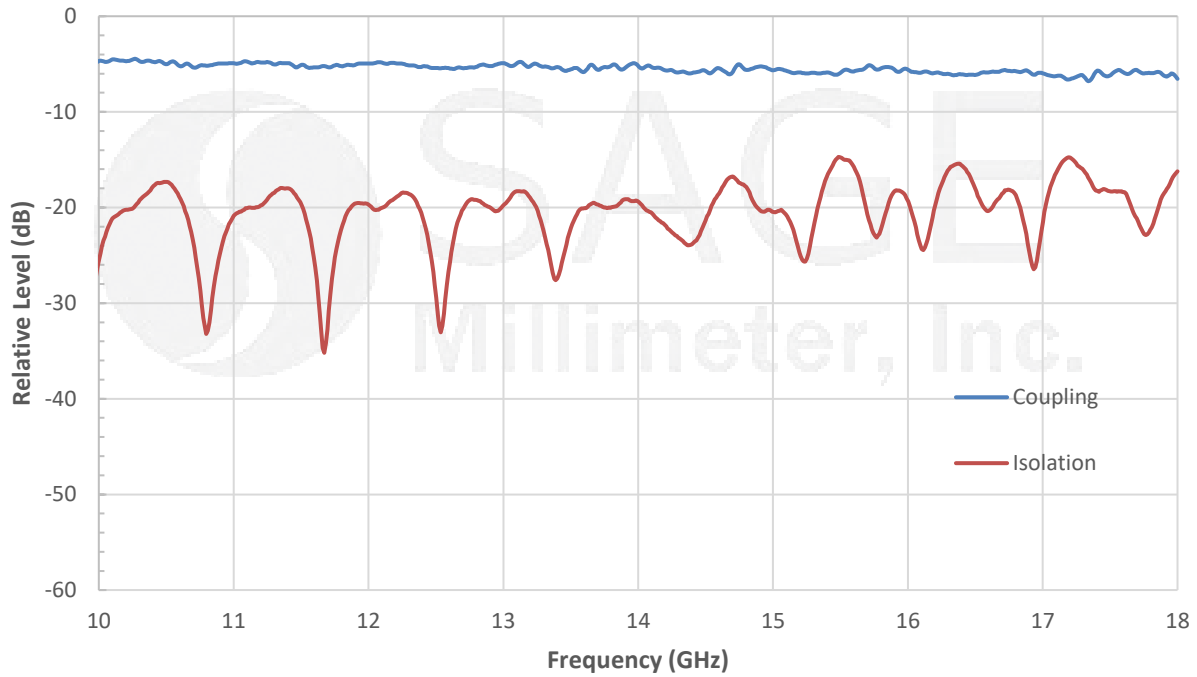
### Mechanical Specifications:

Item	Specification
Input/Output Ports	SMA Female
Case Material	Aluminum
Finishing	Epoxy Paint
Outline	CZ-SS-SR10

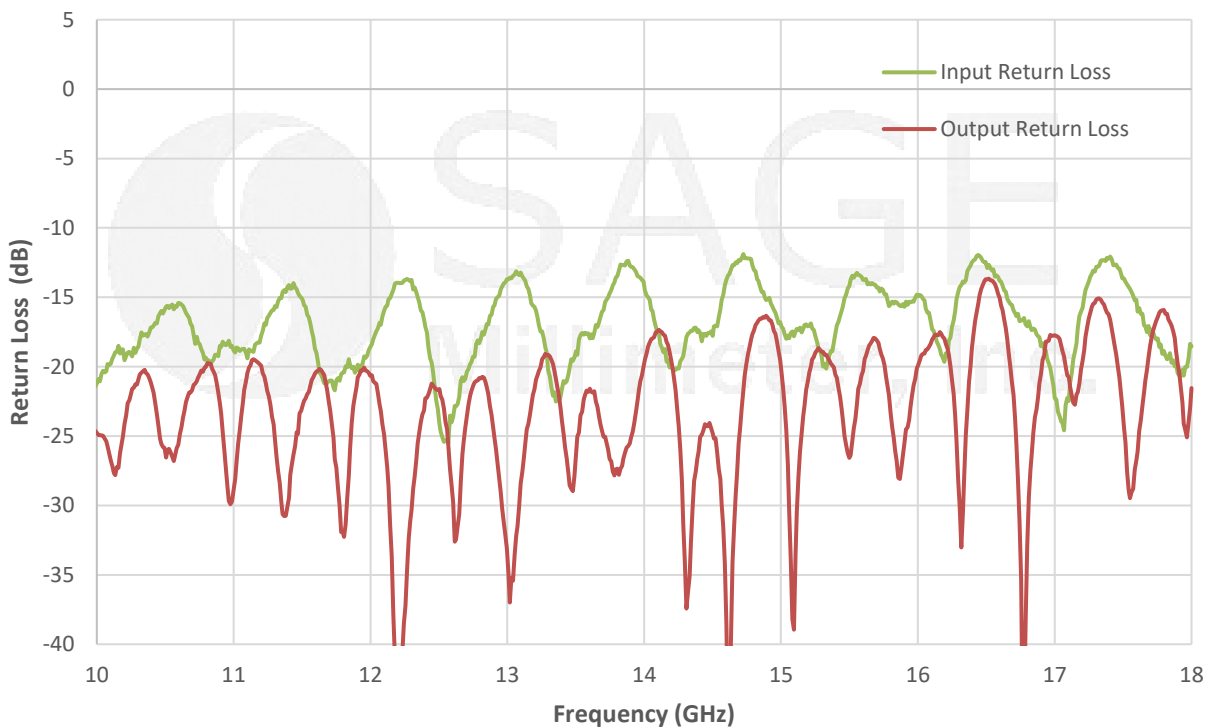


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### Typical Performance vs. Frequency

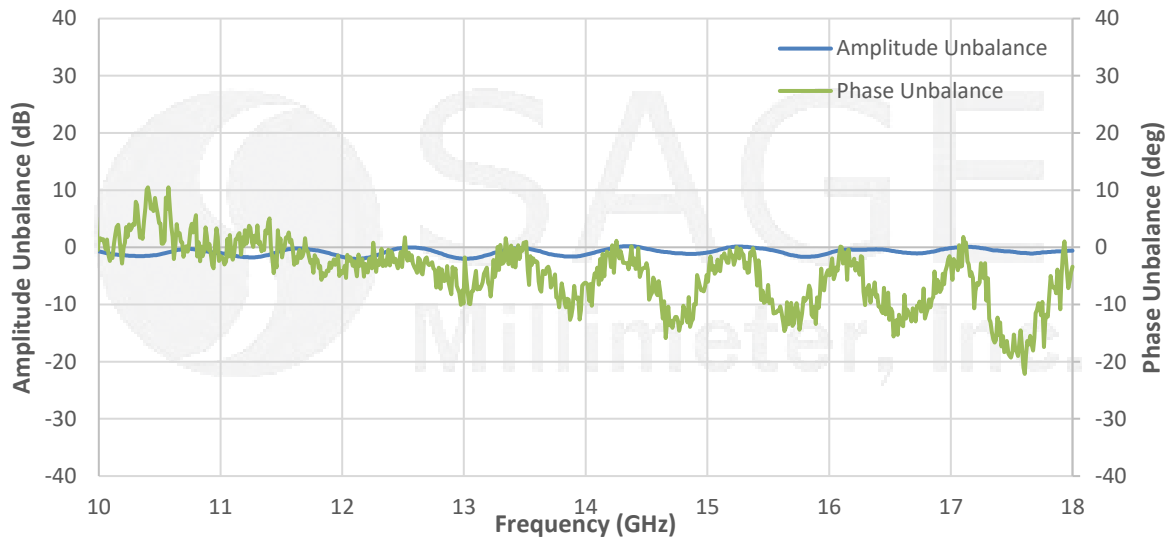


### Typical Return Loss vs. Frequency

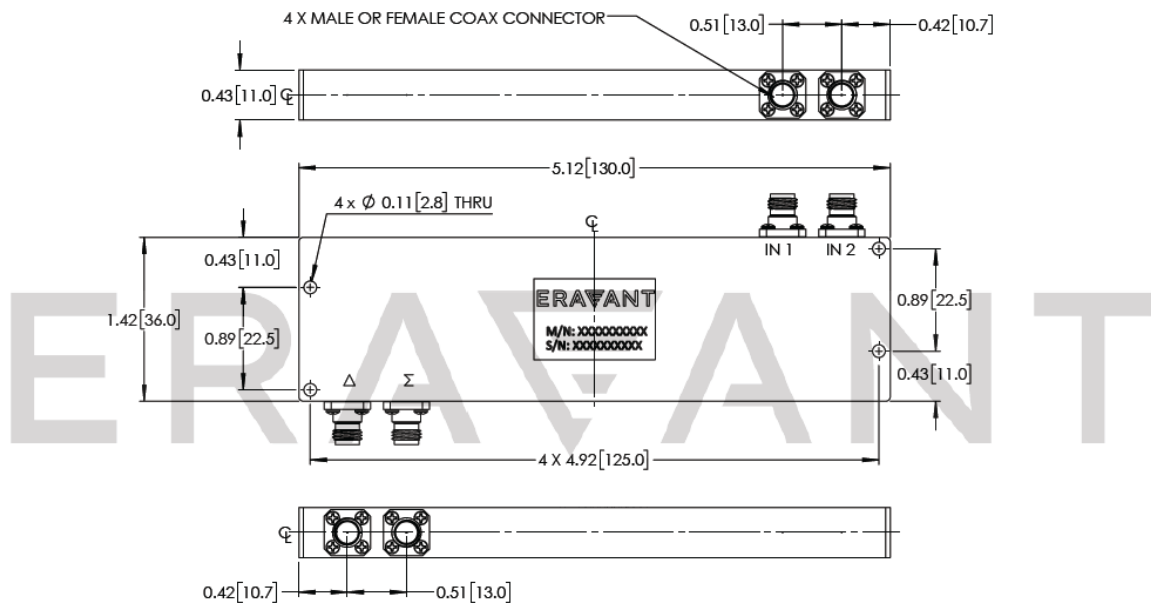


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### Amplitude and Phase Unbalance vs. Frequency



### Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



#### Note:

- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

#### Caution:

- Proper torque,  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-U3, is highly recommended.**

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