



## Coaxial Hybrid Coupler, 4 to 24 GHz, 90 Degrees

### Description:

Model **SCZ-0432431409-SFSF-43** is a coaxial 90-degree hybrid coupler that covers the frequency range of 4.0 to 24 GHz. The nominal coupling is 3 dB and the typical insertion loss is 1.5 dB. The typical isolation of the coupler is 14 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	4.0 GHz		24 GHz
Insertion Loss		1.5 dB	
Isolation		14 dB	
Coupling		3 dB	
Return Loss		12 dB	
Amplitude Unbalance		±0.8 dB	
Phase Unbalance		±7°	
Impedance		50 Ω	
Power Handling			50 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-45 °C		+85 °C

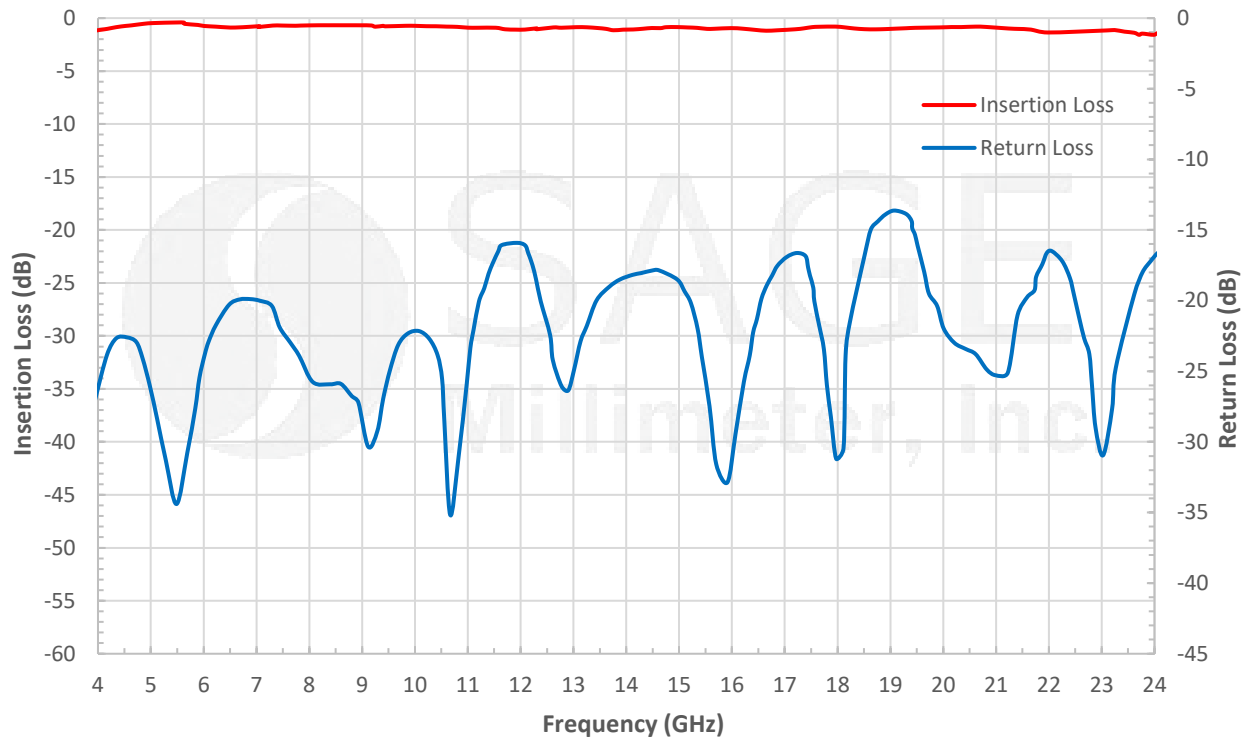
### Mechanical Specifications:

Item	Specification
Input/Output Ports	SMA Female
Case Material	Aluminum
Finishing	Epoxy Paint
Weight	6 Oz
Outline	CZ-SS-SR7

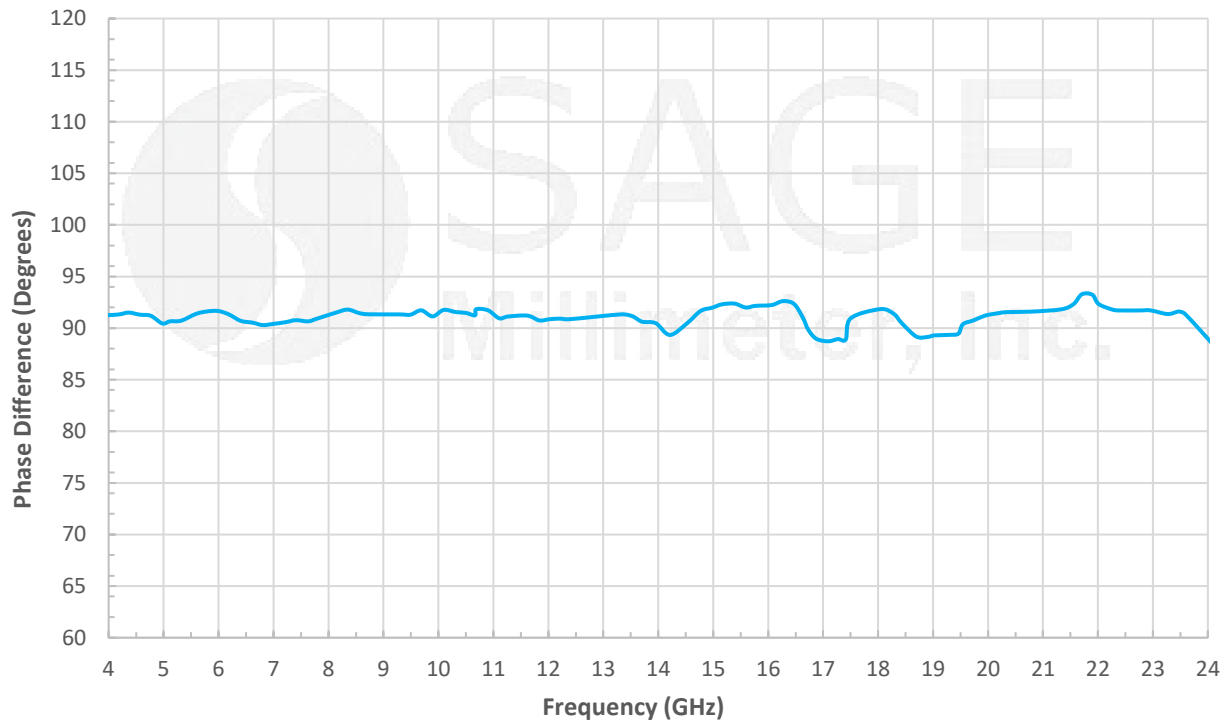


## Coaxial Hybrid Coupler, 4 to 24 GHz, 90 Degrees

### Typical Performance vs. Frequency

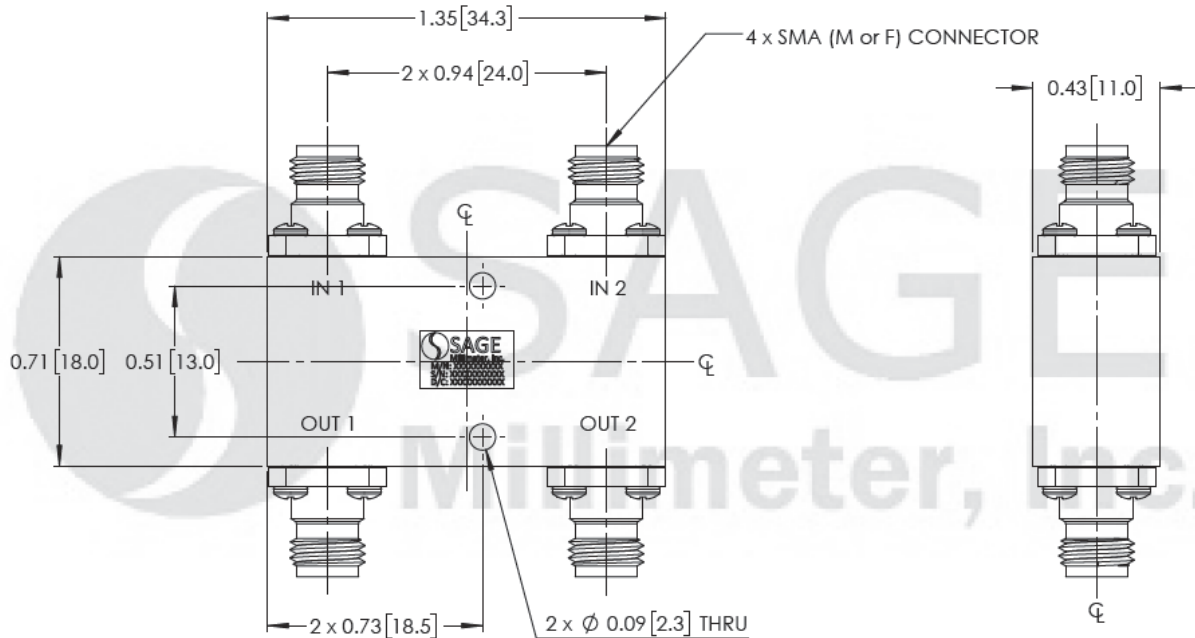


### Typical Phase Difference vs. Frequency



## Coaxial Hybrid Coupler, 4 to 24 GHz, 90 Degrees

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



**Note:**

- All data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25 °C case temperature.
- 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.**

