



## Coaxial Directional Coupler, 18 to 50 GHz, 20 dB Coupling Level

### Description:

**SCD-1835032010-2F-SA** is a 20 dB coaxial directional coupler that covers the frequency range of 18 to 50 GHz. The nominal insertion loss of the coupler is 2.3 dB and the coupling ripple is  $\pm 1.2$  dB. The directivity of the coupler is 10 dB. The RF connectors of the coupler are 2.4 mm female 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:

- Low Insertion Loss
- Flat Coupling Level

### Applications:

- Test Labs
- Instrumentations
- Sub-assemblies

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	18 GHz		50 GHz
Insertion Loss		2.3 dB	
Coupling		20 dB	
Coupling Flatness		$\pm 1.2$ dB	
Directivity		10 dB	
Port Return Loss		10 dB	
Impedance		50 $\Omega$	
Power Handling			50 W (CW)
Specification Temperature		+25 °C	
Operating Temperature	-40 °C		+80 °C

### Mechanical Specifications:

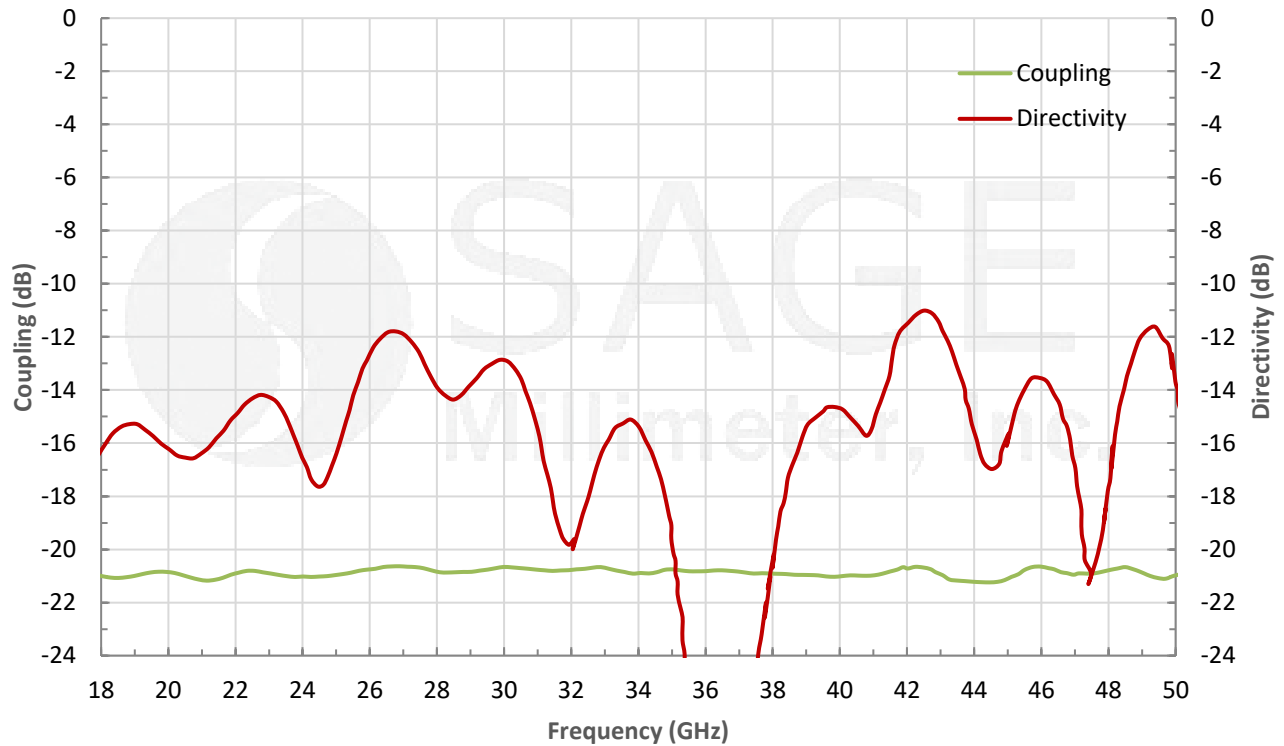
Item	Specification
RF Ports	2.4 mm Female
Case Material	Aluminum
Finishing	Black Painted
Outline	CD-2S-SR2



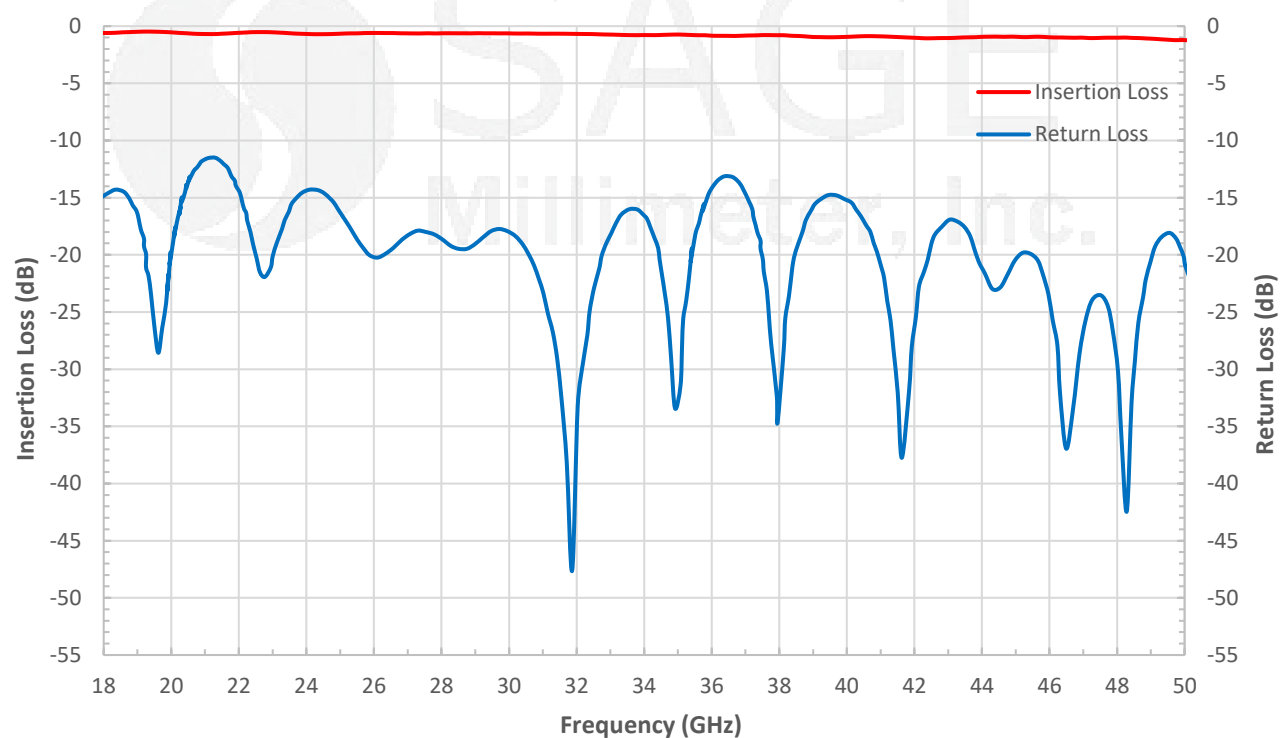


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### Typical Coupling and Directivity vs. Frequency



### Typical Performance vs. Frequency

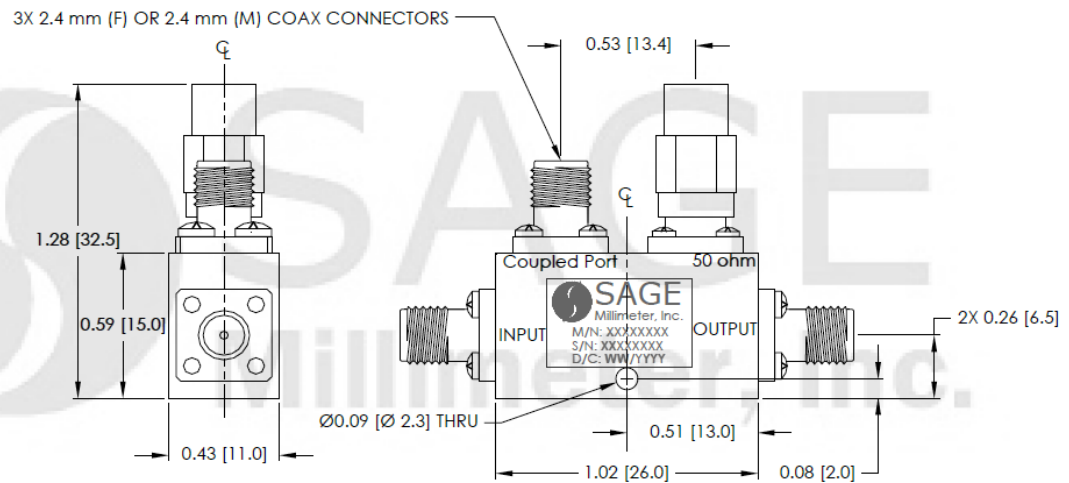


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## Coaxial Directional Coupler, 18 to 50 GHz, 20 dB Coupling Level

**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 ± 0.15 inch-pounds (0.90 ± 0.02 Nm) shall be used. **SAGE Millimeter torque wrench with model number SCH-08008-S1 is highly recommended.**

