



## Coaxial Directional Coupler, 1 to 40 GHz, 10 dB Coupling Level

### Description:

**SCD-0134031010-KF-SA** is a 10 dB coaxial directional coupler that covers the frequency range of 1 to 40 GHz. The nominal insertion loss of the coupler is 2.1 dB and coupling ripple is  $\pm 1.0$  dB. The directivity of the coupler is 10 dB. The RF connectors of the coupler are K (F) 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                 | 1.0 GHz |              | 40 GHz    |
| Insertion Loss            |         | 2.1 dB       |           |
| Coupling                  |         | 10 dB        |           |
| Coupling Flatness         |         | $\pm 1.0$ dB |           |
| Directivity               |         | 10 dB        |           |
| Port Return Loss          |         | 12 dB        |           |
| Impedance                 |         | 50 $\Omega$  |           |
| Power Handling            |         |              | 50 W (CW) |
| Specification Temperature |         | +25 °C       |           |
| Operating Temperature     | -40 °C  |              | +80 °C    |

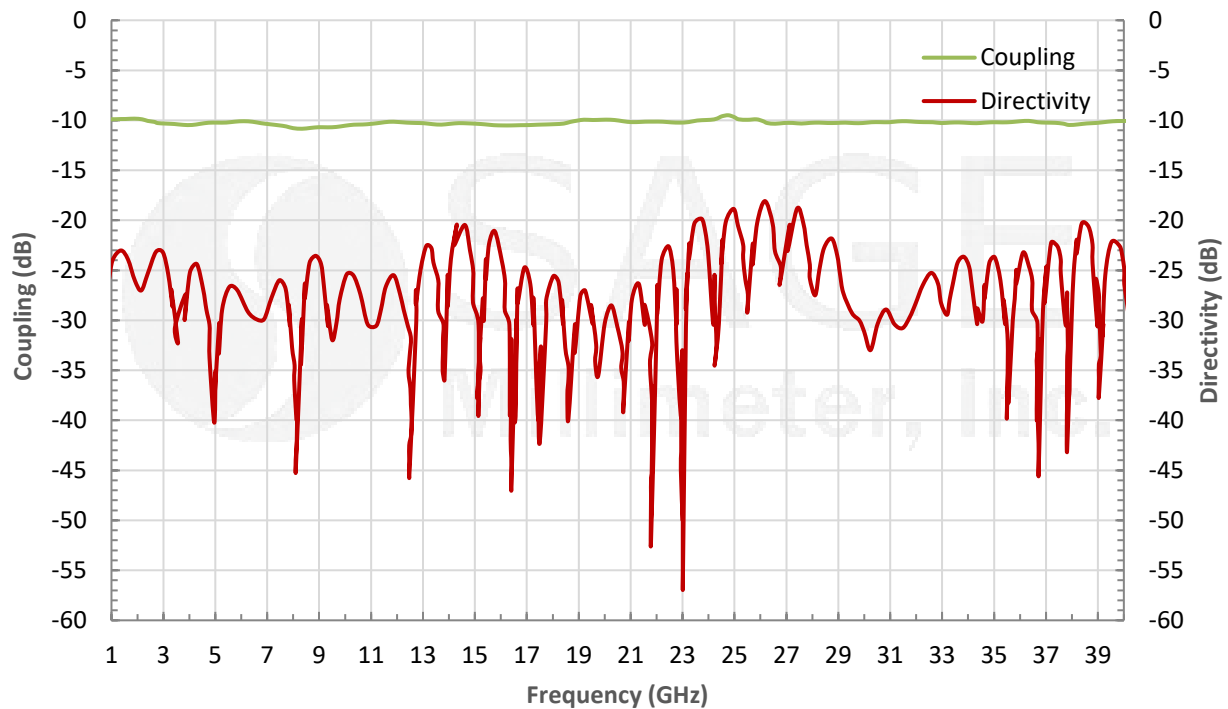
### Mechanical Specifications:

| Item          | Specification                     |
|---------------|-----------------------------------|
| RF Ports      | K(F)                              |
| Case Material | Aluminum                          |
| Finishing     | Black Painted                     |
| Weight        | 1.0 Oz                            |
| Size          | 3.31" (L) x 0.59" (W) x 0.43" (H) |
| Outline       | CD-KS-SR10                        |

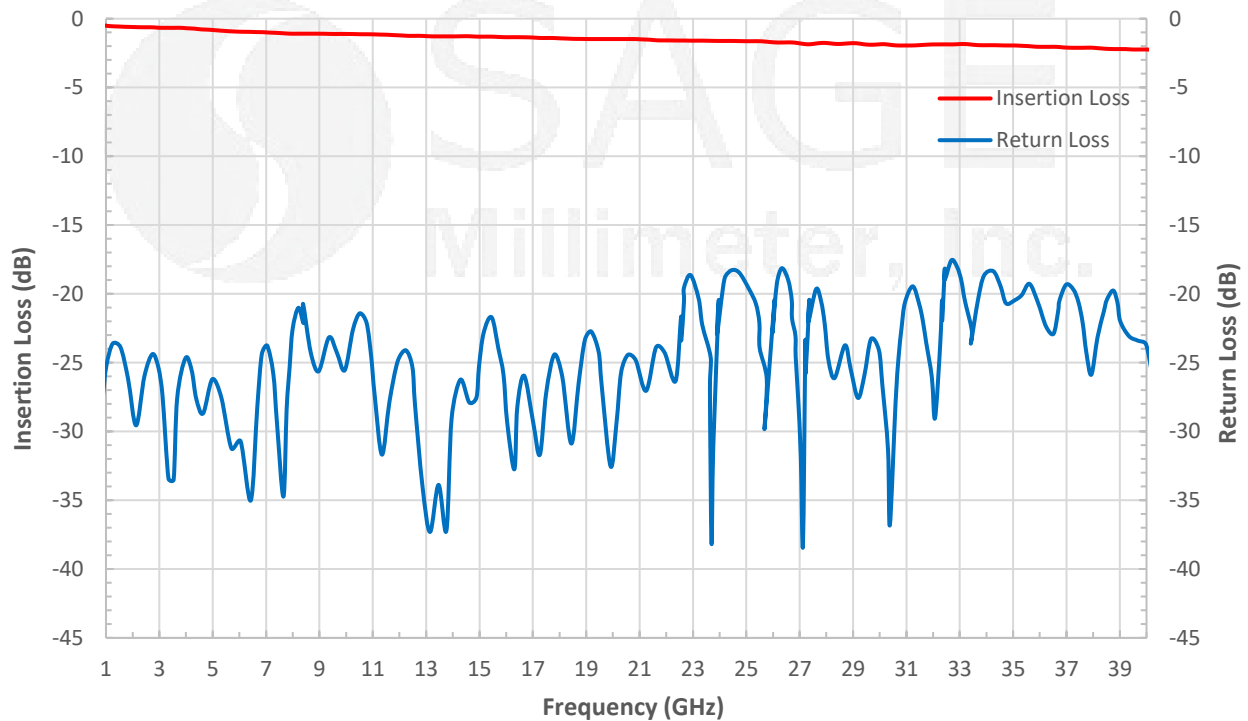


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### Typical Coupling and Directivity vs. Frequency



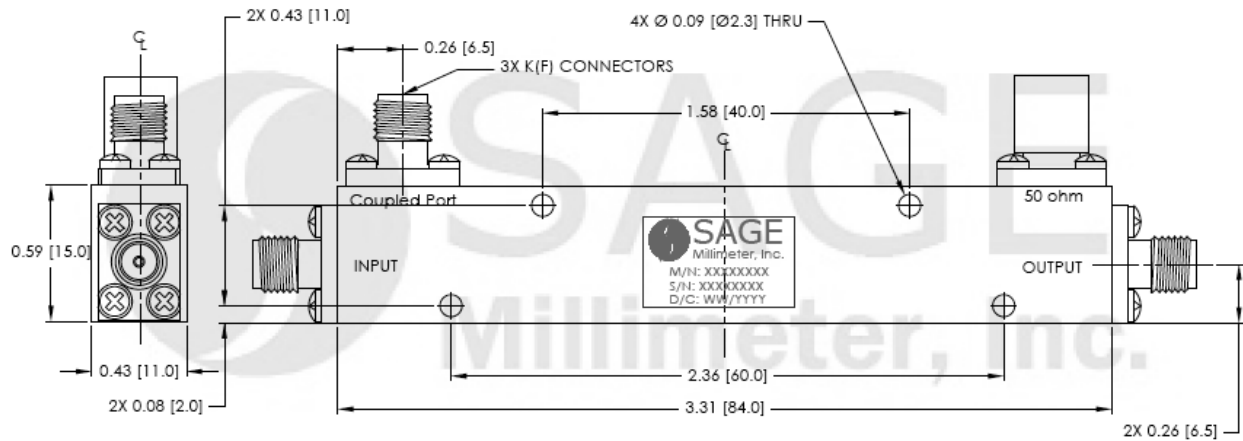
### Typical Performance vs. Frequency





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**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) shall be used. **SAGE Millimeter torque wrench with model number SCH-08008-U3 is highly recommended.**

