# SCZ-0131831518-SFSF-43

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

**SCZ-0131831518-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.

### **Electrical Specifications:**

Parameter	Minimum	Typical	Maximum
Frequency Range	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		50Ω	
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
Finish	Epoxy Paint
Weight	5.1 Oz
Outline	CZ-SS-SR10



ECCN EAR99

- Broad Band
- Low Insertion Loss
- Flat Coupling Level

#### **APPLICATIONS**

- Test Lab
- Instrumentations
- Sub-assemblies

### SUPPLEMENTAL DETAILS



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Final Rev 1.2

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**Typical Performance vs. Frequency** 



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**Amplitude and Phase Unbalance vs. Frequency** 

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



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#### NOTE:

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- Eravant reserves the right to change the information presented without notice.

#### CAUTION:

- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- For 1 mm connectors proper torque should be applied:  $4.0 \pm 0.15$  inch-pounds ( $0.45 \pm 0.02$  Nm). Torque wrench model <u>SCH-06004-S1</u> is highly recommended.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model <u>SCH-08008-S1</u> is highly recommended.

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