SBL-6039033065-1F12-E1-WC

E-Band Low Noise Amplifier, 30 dB Gain, 6.5 dB NF

SBL-6039033065-1F12-E1-WC is a low noise amplifier with a typical small signal gain of 30 dB and a nominal noise figure of 6.5 dB across the frequency range of 60 to 90 GHz. The DC power requirement for the amplifier is +8 V_{DC}/190 mA. The mechanical configuration offers an in line structure with WR-12 UG-387/U flanges and 1 mm female connector. Other port configurations, such as a right angle structure with WR-12 waveguides, are also available under different model numbers.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	60 GHz		90 GHz
Gain		30 dB	
Noise Figure		6.5 dB	
P_{1dB}		+12 dBm	
P_{in}			+15 dBm
Input Return Loss		8 dB	
Output Return Loss		8 dB	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+15 V_{DC}
DC Supply Current		190 mA	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

Mechanical Specifications:

Item	Specification
Input Port	1 mm (F) Connector
Output Port	WR-12 Waveguide with UG-387/U Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.9 Oz
Size	1.89” (L) X 1.10” (W) X 0.75” (H)
Outline	BG-SE-2CW-WC

ECCN

3A001.b.4

FEATURES

- Full Waveguide Band Performance
- State-of-the-Art Noise Figure
- High Gain

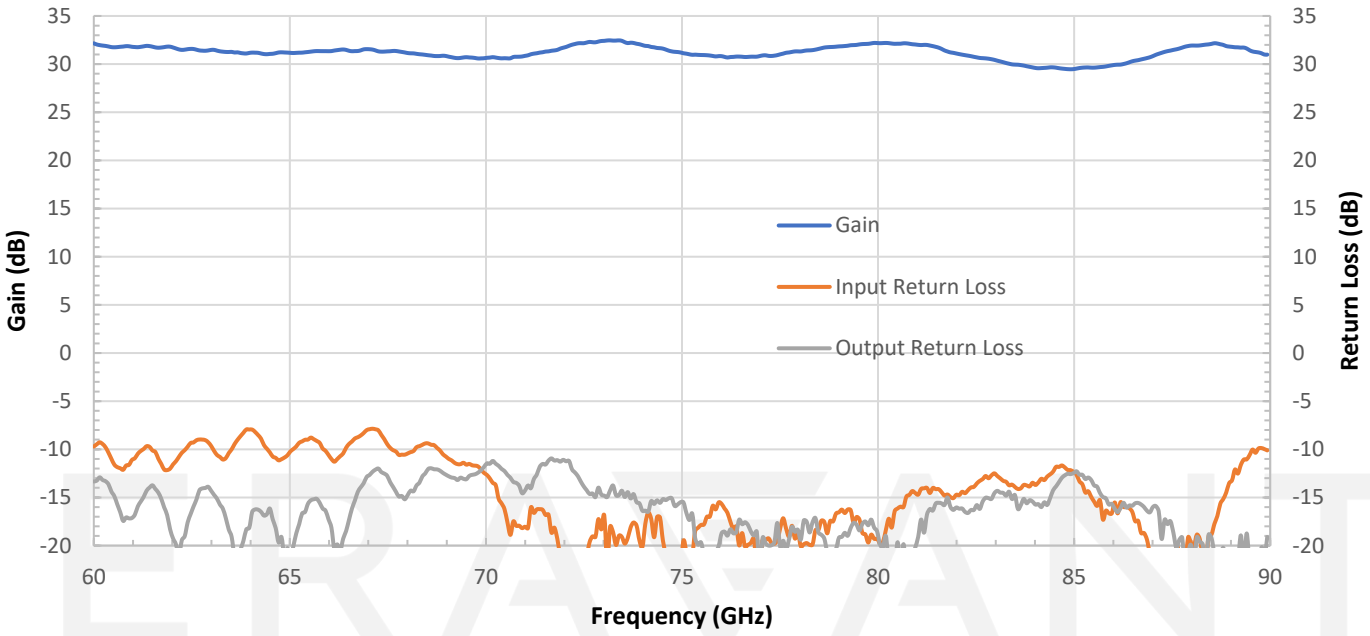
APPLICATIONS

- Radar Systems
- Communication Systems
- Low Noise Receivers

SUPPLEMENTAL DETAILS

Gain and Return Loss vs. Frequency

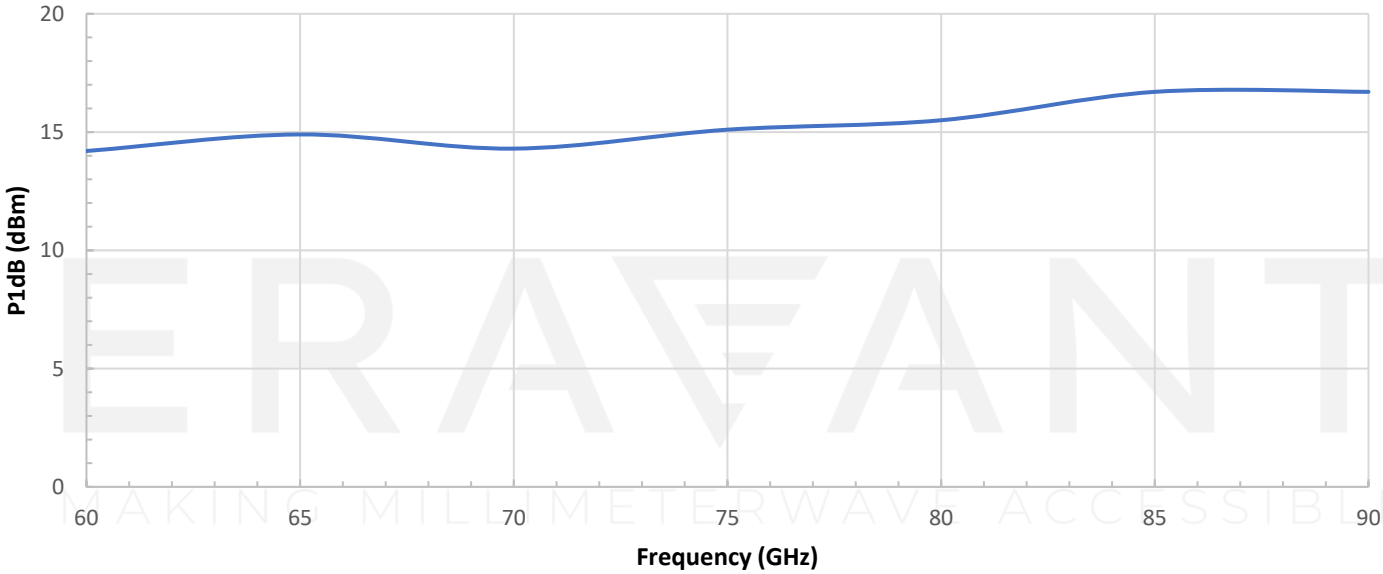
Bias: +8 V_{DC}/234 mA



P1dB vs. Frequency

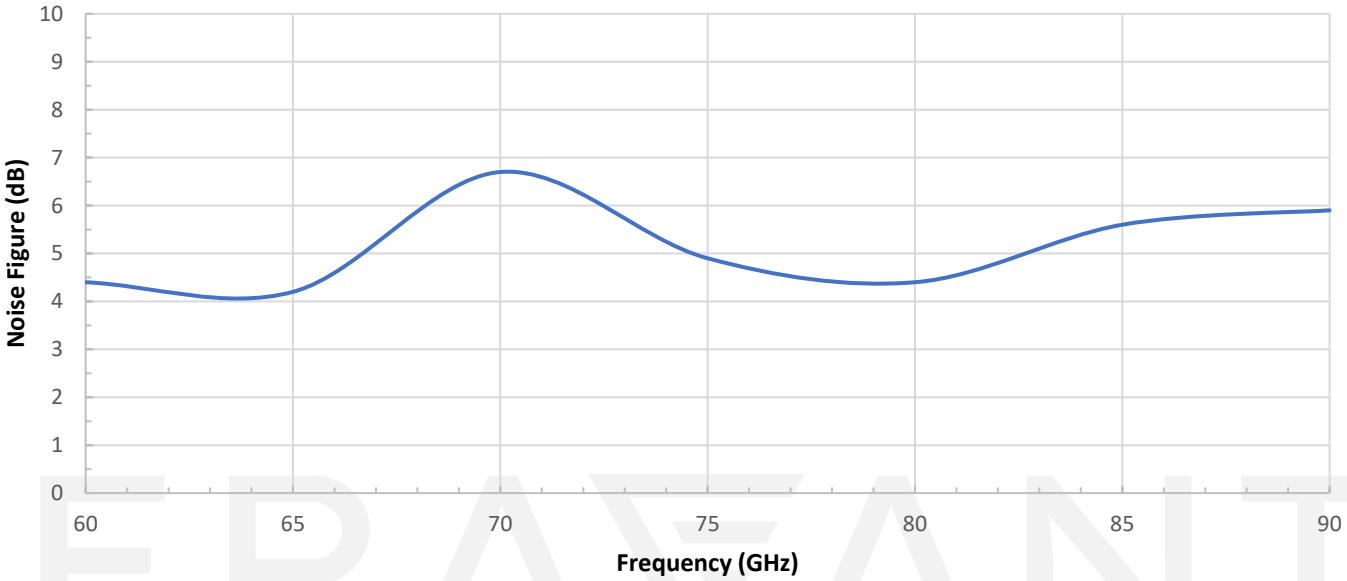
Bias: +8 V_{DC}/234 mA

RFsat: +8 Vdc/ 300 mA

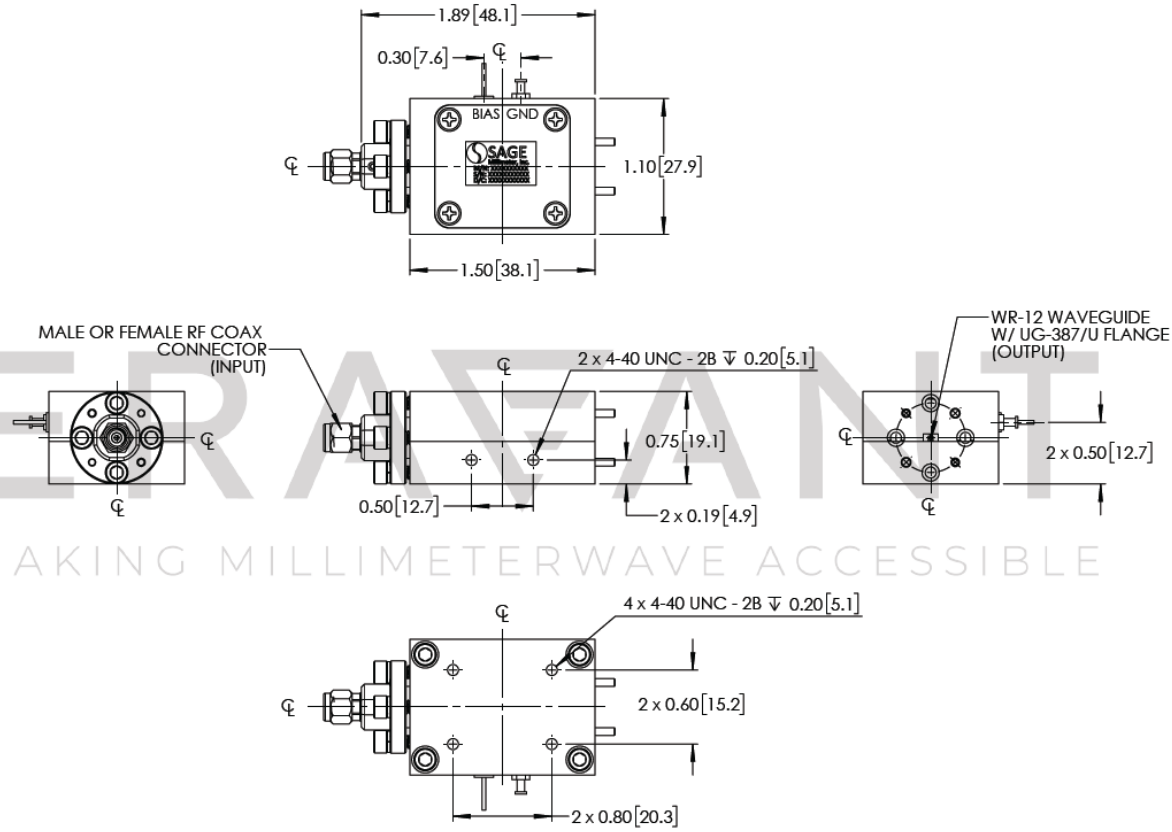


Noise Figure vs. Frequency

Bias: +8V_{DC}/ 234 mA



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



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.
- Other mechanical configurations are available under different model numbers.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Exceeding absolute maximum ratings will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- The case temperature of the device shall never exceed +50 C°. Use proper heatsink or fan if necessary.
- 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 ± 0.15 inch-pounds (0.45 ± 0.02 Nm). Torque wrench model SCH-06004-S1 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 SCH-08008-S1 is highly recommended.

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