SBL-7539032540-1212-E1

Rev 1.1

E-Band Low Noise Amplifier, 75 to 90 GHz, 25 dB Gain, 5 dB NF

Description:

Model SBL-7539032540-1212-E1 is a E band low noise amplifier with a typical small signal gain of 25 dB and a nominal noise figure of 5 dB across the frequency range of 79 to 90 GHz. The DC power requirement for the amplifier is +8 V_{DC}/30 mA. The mechanical configuration offers an in line structure with WR-12 waveguides and UG-387/U-M anti-cocking flanges. Other port configurations, such as with 1 mm connectors or a right angle structure with WR-12 waveguides, are also available under different model numbers.

Features:

- State-of-the-Art Noise Figure
- Broadband Performance
- Low Power Consumption

Applications:

- Low Noise Receivers
- Radar Systems
- Communication Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	75 GHz		90 GHz
Gain		25 dB	
Noise Figure (79 – 90 GHz)		5 dB	
P_{in}			-20 dBm
Output P_{1dB}		+2 dBm	
Input Return Loss		6 dB	
Output Return Loss		6 dB	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+12 V_{DC}
DC Supply Current		30 mA	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

Item	Specification
Input	WR-12 Waveguide with UG-387/U-M Anti-Cocking Flange
Output	WR-12 Waveguide with UG-387/U-M Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finishing	Gold Plated
Weight	1.6 Oz
Size	1.10” (W) 1.50” (L) X 0.75” (H)
Outline	BG-SE-2-A

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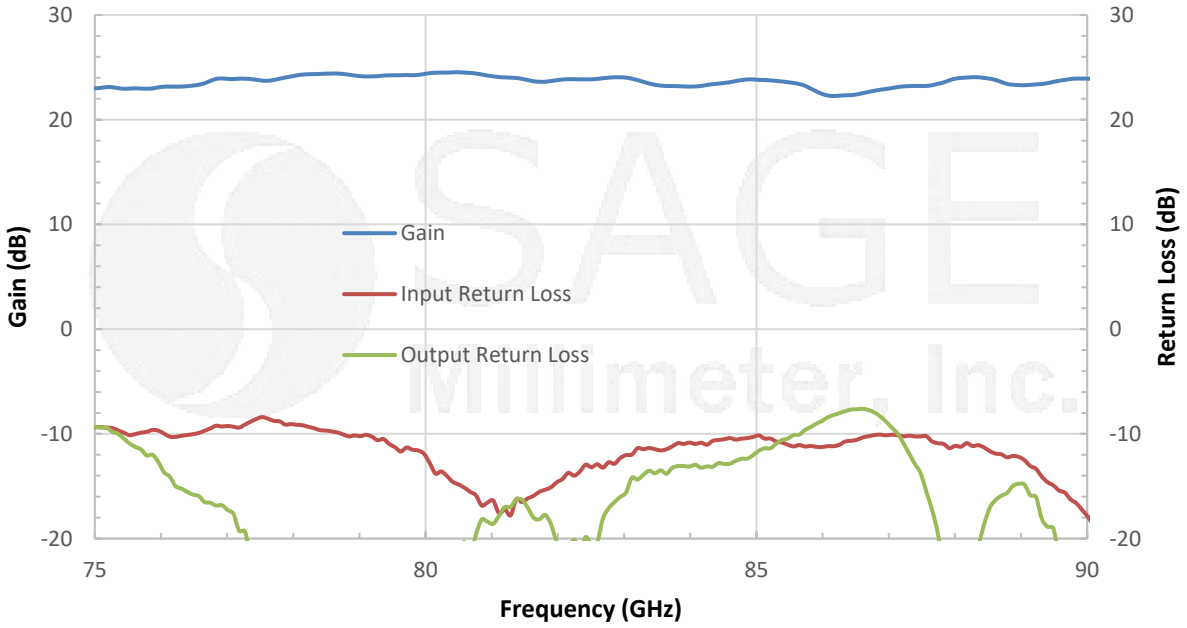
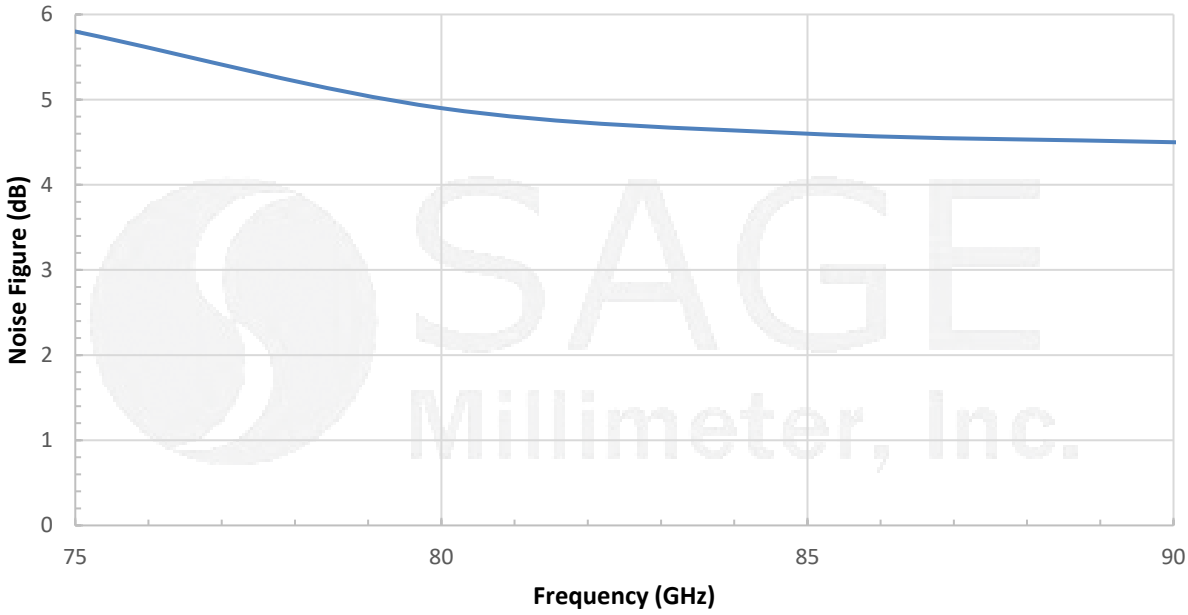
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/30 mA



Noise Figure vs. Frequency

Bias: +8V_{DC}/30 mA



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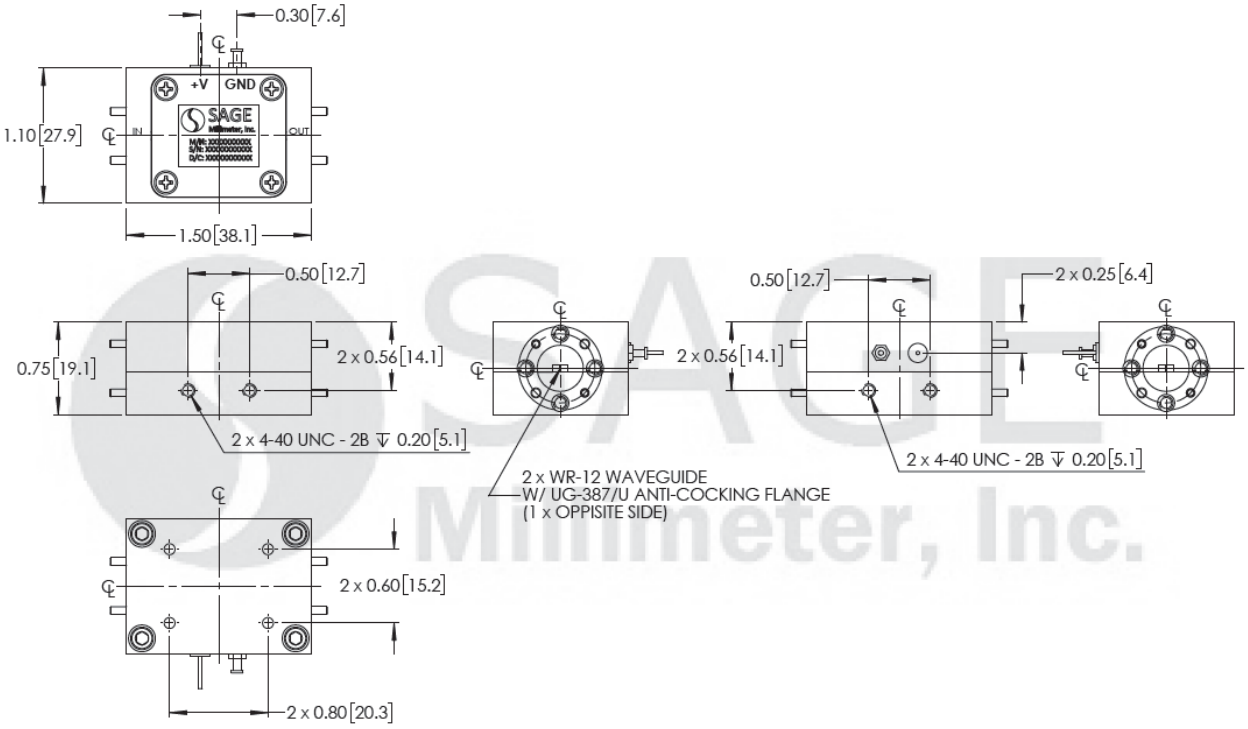
Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- All testing was performed under +25 ˚C case temperature.
- Eravant reserves the right to change the information presented without notice.
- Other mechanical configurations are available under different model numbers.

Caution:

- Exceeding absolute maximum ratings shown 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.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.