SBL-5037534025-1515-E1

Final Rev 1.2

V-Band Low Noise Amplifier, 50 to 75 GHz, 40 dB Gain, 3.0 dB NF

Description:

Model SBL-5037534025-1515-E1 is a low noise amplifier with a typical small signal gain of 40 dB and a nominal noise figure of 3.0 dB across the frequency range of 50 to 75 GHz. The DC power requirement for the amplifier is +8 V_{DC}/250 mA. The mechanical configuration offers an in line structure with WR-15 waveguides and UG-385/U anti-cocking flanges. Other port configurations, such as with 1 mm connectors or a right angle structure with WR-15 waveguides, are also available under different model numbers.

Features:

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

Applications:

- IEEE 802.11ab WiGig
- Low Noise Receivers
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	50 GHz		75 GHz
Gain		40 dB	
Noise Figure		3.0 dB	
P_{1dB}		+12 dBm	
P_{in}			+5 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+15 V_{DC}
DC Supply Current		250 mA	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

Item	Specification
Input	WR-15 Waveguide with UG-385/U Anti-Cocking Flange
Output	WR-15 Waveguide with UG-385/U Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.6 Oz
Size	1.10” (W) 1.50” (L) X 0.75” (H)
Outline	BG-SV-2-A

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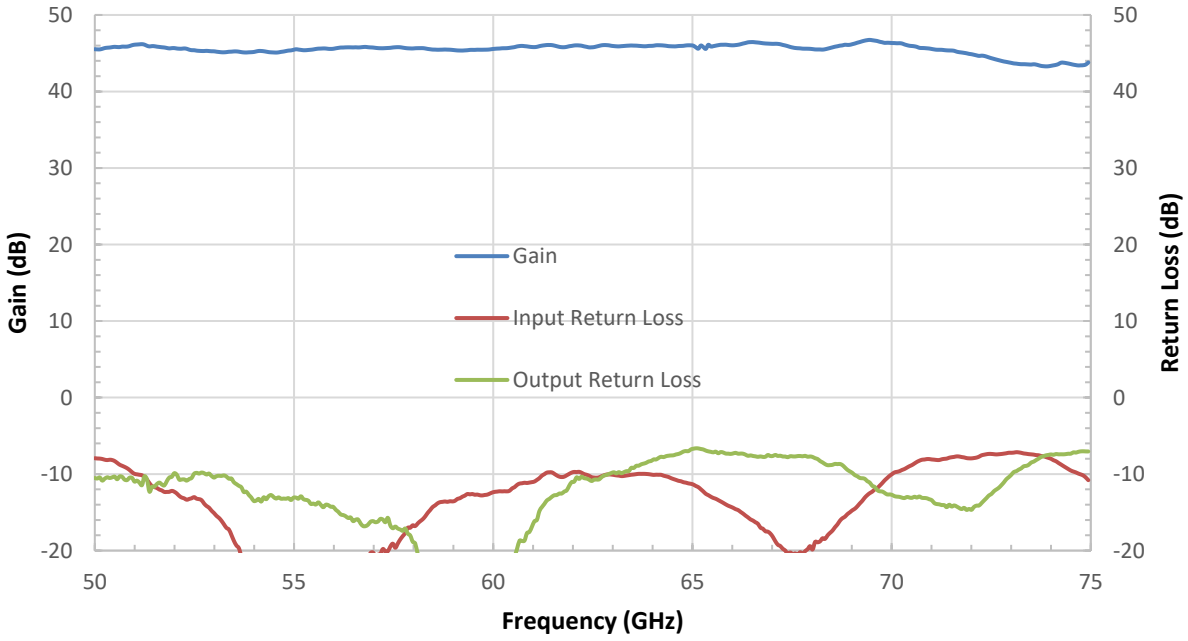
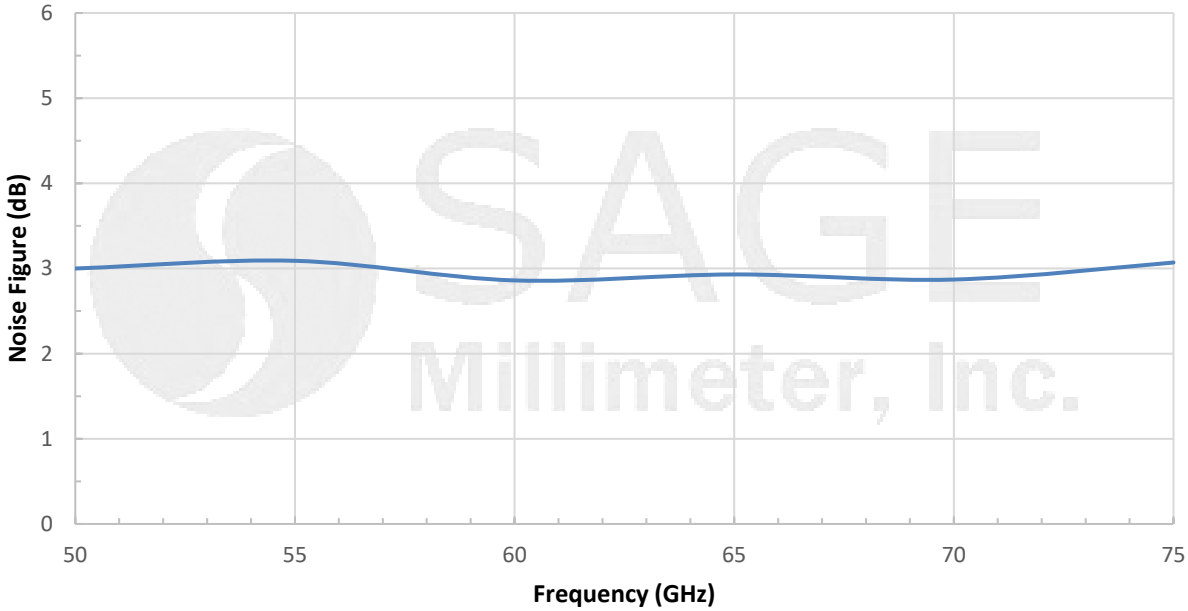
Typical Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/250 mA



Typical Noise Figure vs. Frequency

Bias: +8V_{DC}/250 mA



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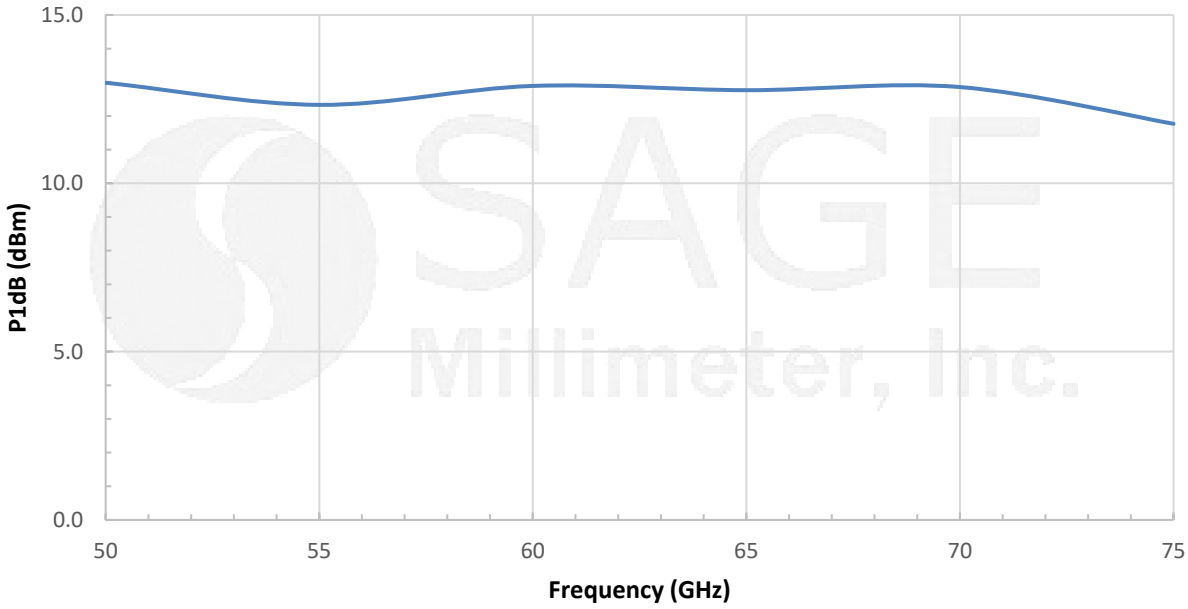
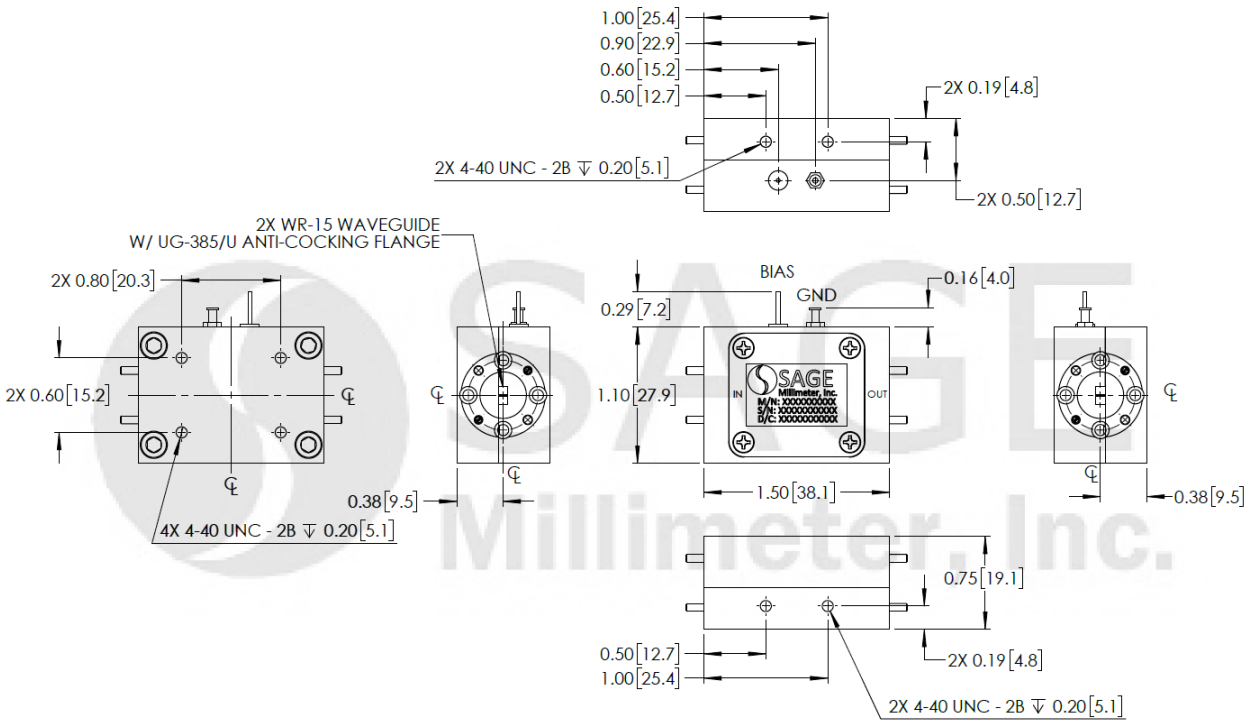
Typical P1dB vs. Frequency

Bias: +8 V_{DC}/250 mA



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



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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 may damage the device.