SBL-3734435025-1919-E1

Advanced Rev 1.2

U-Band Low Noise Amplifier, 37 to 44 GHz, 50 dB Gain, 2.5 dB NF

Description:

Model SBL-3734435025-1919-E1 is a low noise amplifier with a typical small signal gain of 50 dB across the frequency range of 37 to 44 GHz and a nominal noise figure of 2.5 dB. The DC power requirement for the amplifier is +8 V_{DC}/1.7 A. The mechanical configuration offers an in-line structure WR-19 Uni-Guide™ waveguides. Other port configurations, such as a right angle structure with WR-19 waveguides or 1.85 mm connectors, are also available under different model numbers.

Features:

- Good Gain Flatness
- State-of-the-Art Noise Figure

Applications:

- Starlink
- Low Noise Receivers

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	37 GHz		44 GHz
Gain		50 dB	
Noise Figure		2.5 dB	
P_{1dB}		+29 dBm	
P_{in}			+5 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+12 V_{DC}
DC Supply Current		1.7 A	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

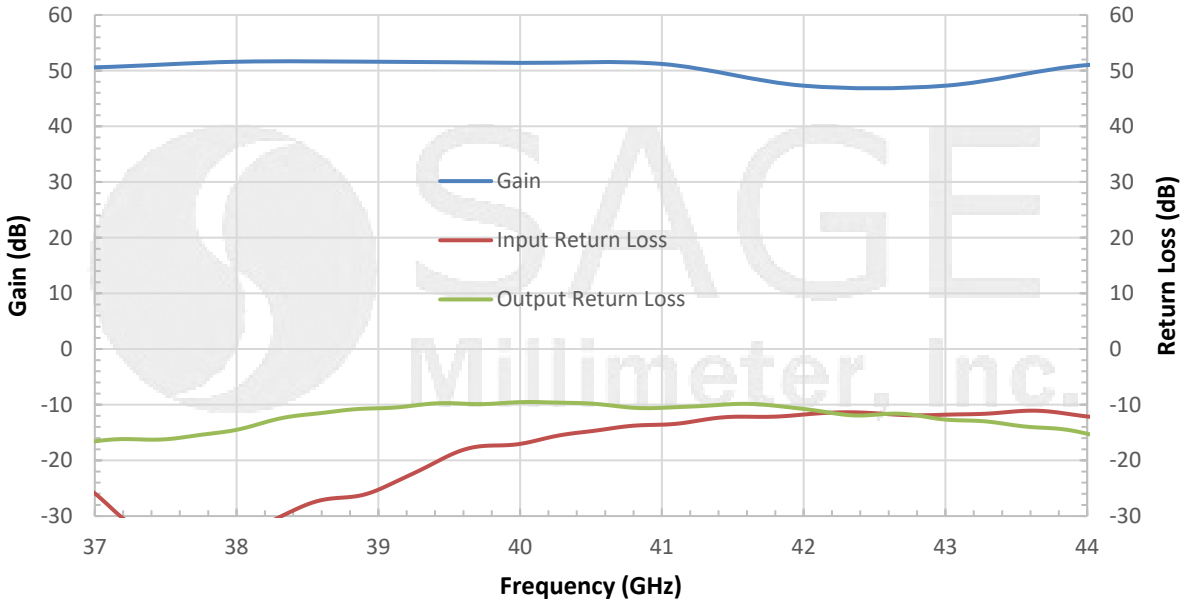
Item	Specification
Input Port	WR-19 Uni-Guide™ Waveguide with UG-383/U-M Anti-Cocking Flange
Output Port	WR-19 Uni-Guide™ Waveguide with UG-383/U-M Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	2.0 Oz
Size	1.98” (L) 1.20” (W) X 1.13” (H)
Outline	BG-SU-2-A

www.eravant.com | 501 Amapola Ave, Torrance, CA 90501
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: support@eravant.com

U-Band Low Noise Amplifier, 37 to 44 GHz, 50 dB Gain, 2.5 dB NF

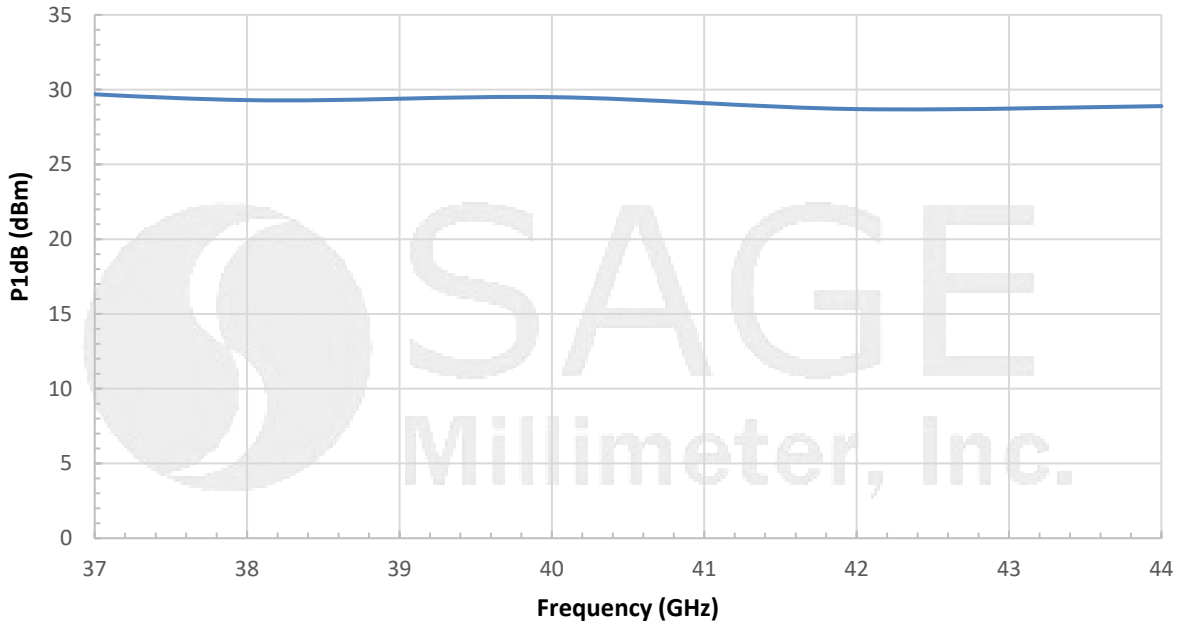
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/1.7 A



P1dB vs. Frequency

Bias: +8 V_{DC}/1.7 A

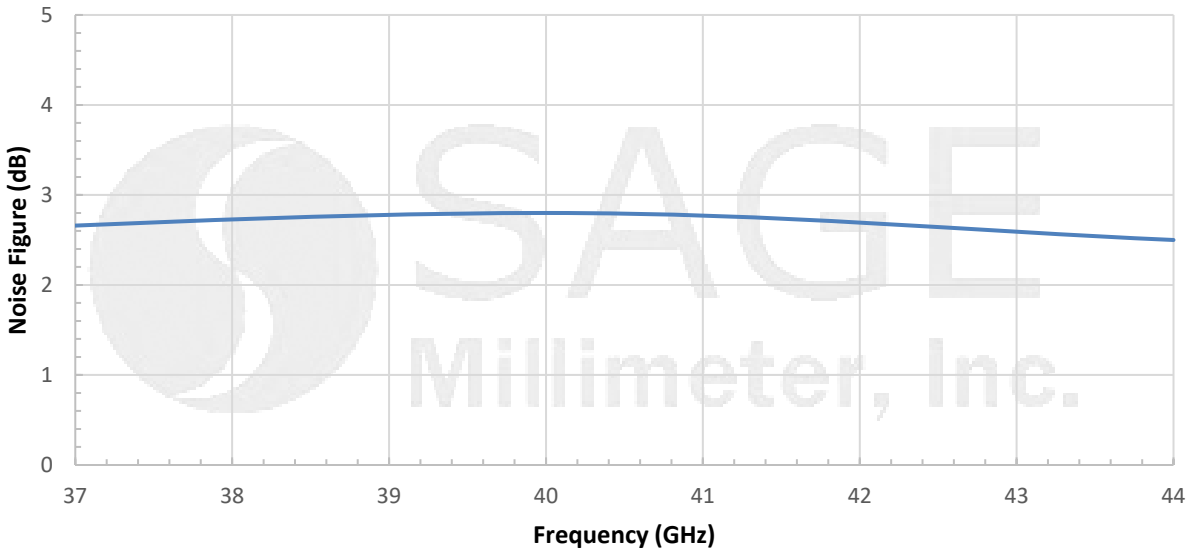


www.eravant.com | 501 Amapola Ave, Torrance, CA 90501
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: support@eravant.com

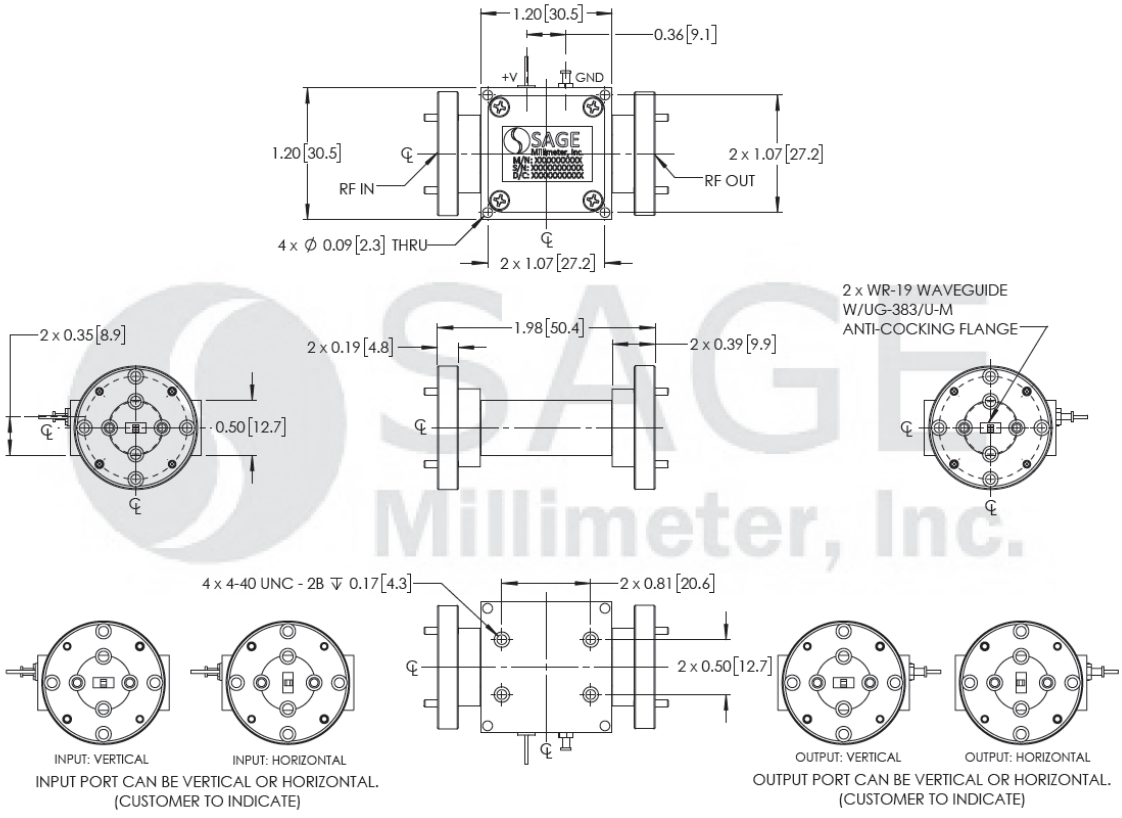
U-Band Low Noise Amplifier, 37 to 44 GHz, 50 dB Gain, 2.5 dB NF

Noise Figure vs. Frequency

Bias: +8V_{DC}/1.7 A



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



www.eravant.com | 501 Amapola Ave, Torrance, CA 90501
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: support@eravant.com

U-Band Low Noise Amplifier, 37 to 44 GHz, 50 dB Gain, 2.5 dB NF

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.
- The amplifier employs Eravant's trademarked and patent pending technology, the **Uni-Guide™**, as its waveguide interfaces. The orientation of the input and the output waveguides can be specified through corresponding model numbers. For example, the model number for a vertical input waveguide and horizontal output waveguide configuration would be **SBP-3734435025-1919H-E1** instead of the default **SBL-3734435025-1919-E1** which indicates vertical orientation for both input and output.
- 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 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.