SBL-7531043550-1010-E1-WPC

Rev. 1.0

W-Band Low Noise Amplifier, 75 to 100 GHz, 25 dB Gain, 5 dB NF

Description:

Model SBL-7531043550-1010-E1-WPC is a W-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 75 to 100 GHz. The DC power requirement for the amplifier is +8 V_{DC}/100 mA. The mechanical configuration offers an in line structure with WR-10 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-10 waveguides, are also available under different model numbers.

Features:

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

Applications:

- W-Band Imaging
- Communication Systems
- Radar Systems

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	75 GHz		100 GHz
Gain		25 dB	
Noise Figure		5 dB	
P_{1dB}		-5 dBm	
P_{in}			+15 dBm
Input Return Loss		6 dB	
Output Return Loss		8 dB	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+15 V_{DC}
DC Supply Current		100 mA	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

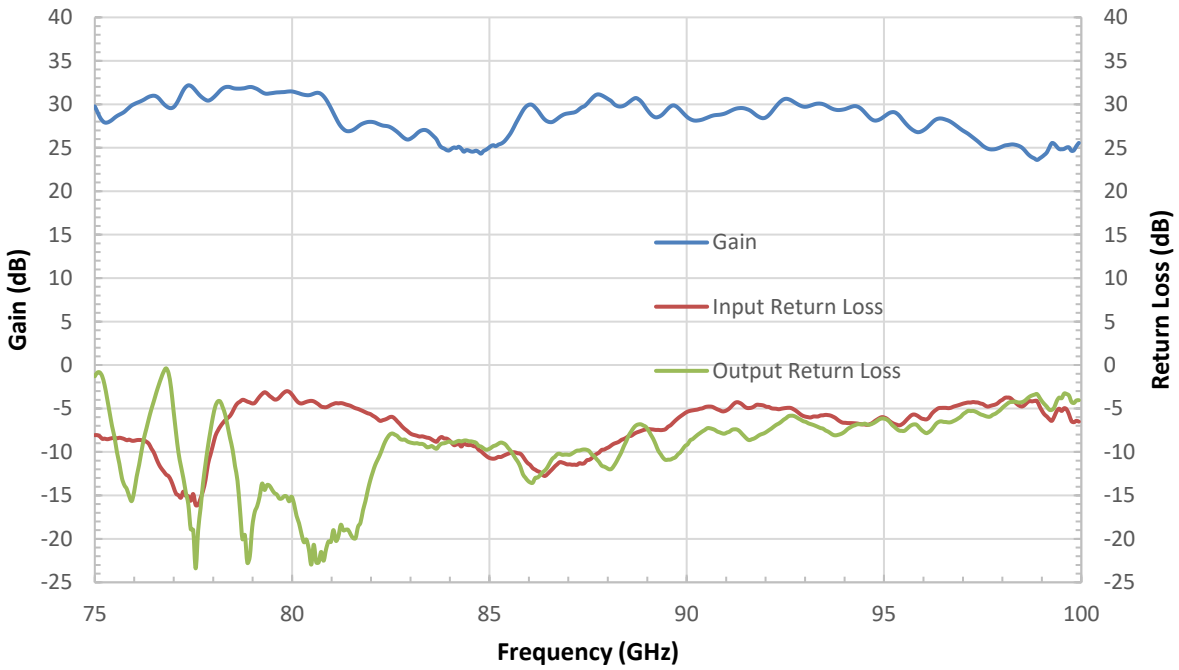
Item	Specification
Input	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
Output	WR-10 Waveguide with UG-387/U-M Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.6 Oz
Size	1.10” (W) X 1.50” (L) X 0.75” (H)
Outline	BG-SW-2-A

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

W-Band Low Noise Amplifier, 75 to 100 GHz, 25 dB Gain, 5 dB NF

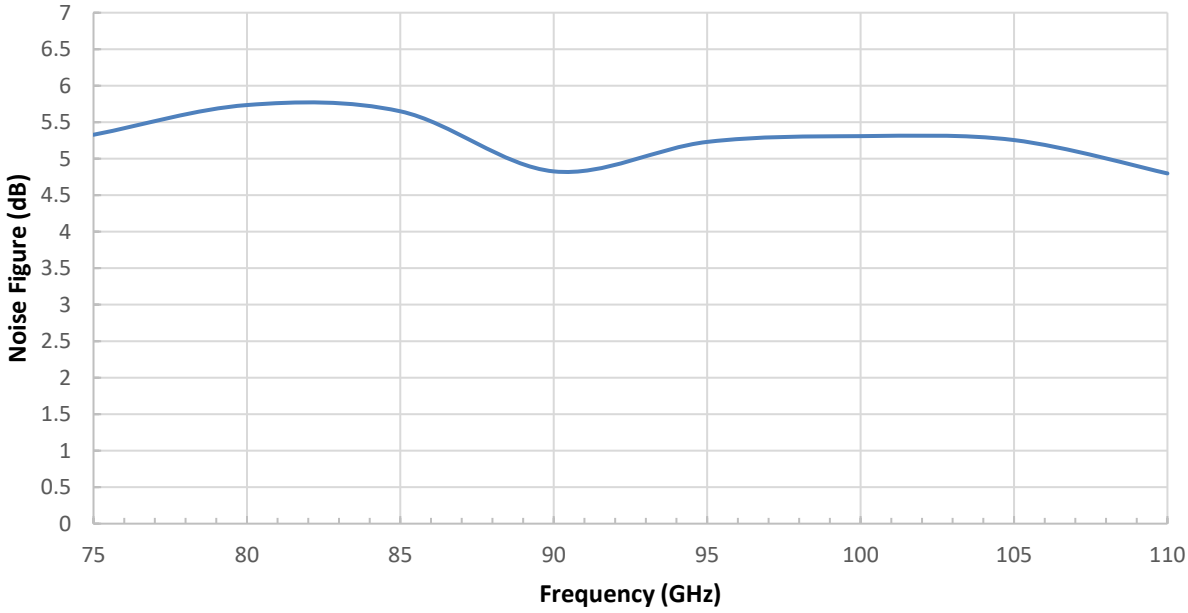
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/80 mA



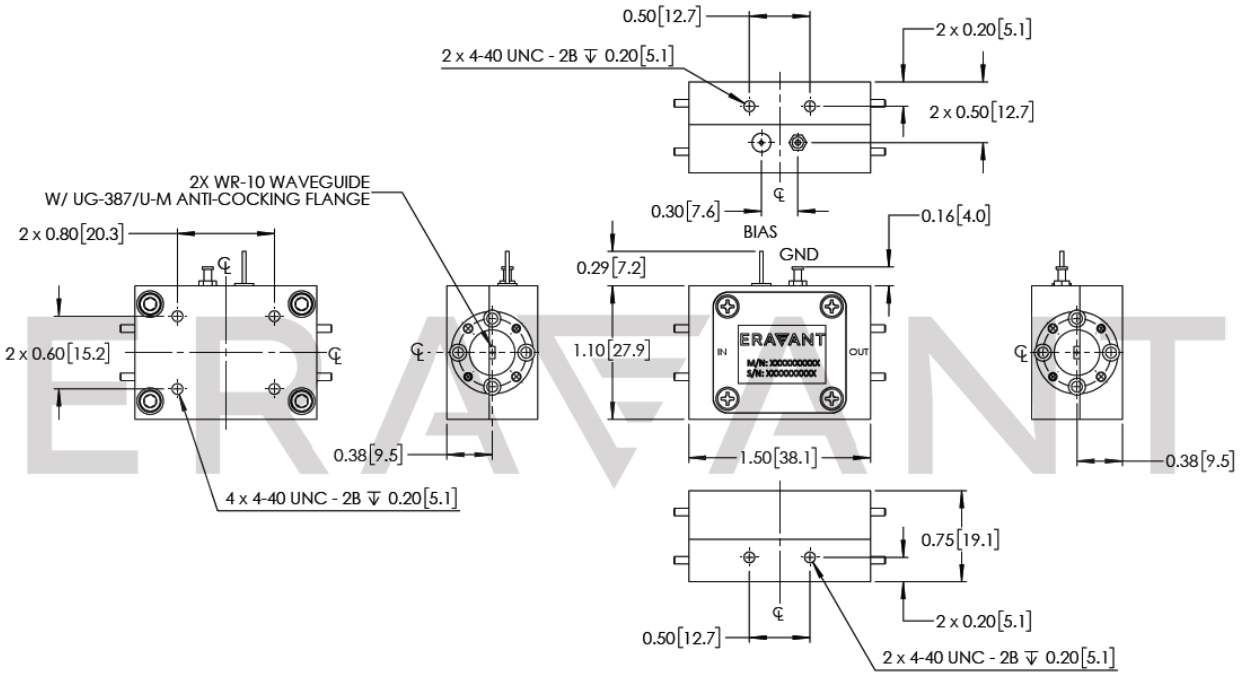
Noise Figure vs. Frequency

Bias: +8V_{DC}/80 mA



W-Band Low Noise Amplifier, 75 to 100 GHz, 25 dB Gain, 5 dB NF

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.
- 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 possible device damage.