SBL-7138632040-1212-E1-WPC

E-Band Low Noise Amplifier, 71 to 86 GHz, 17 dB Gain



SBL-7138632040-1212-E1-WPC is a low noise amplifier with a typical small signal gain of 17 dB and a nominal noise figure of 6 dB across the frequency range of 71 to 86 GHz. The DC power requirement for the amplifier is +8 VDC/30 mA. The mechanical configuration offers an in line structure with WR-12 waveguides and UG-387/U 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.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	71 GHz		86 GHz
Gain		17 dB	
Noise Figure		6 dB	
P_{1dB}		+2 dBm	
P_{in}			-20 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-385/U Anti-Cocking Flange
Output	WR-12 Waveguide with UG-385/U Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.6 Oz
Size	1.50” (L) X 1.10” (W) X 0.75” (H)
Outline	BG-SE-2-A

ECCN

EAR99

FEATURES

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

APPLICATIONS

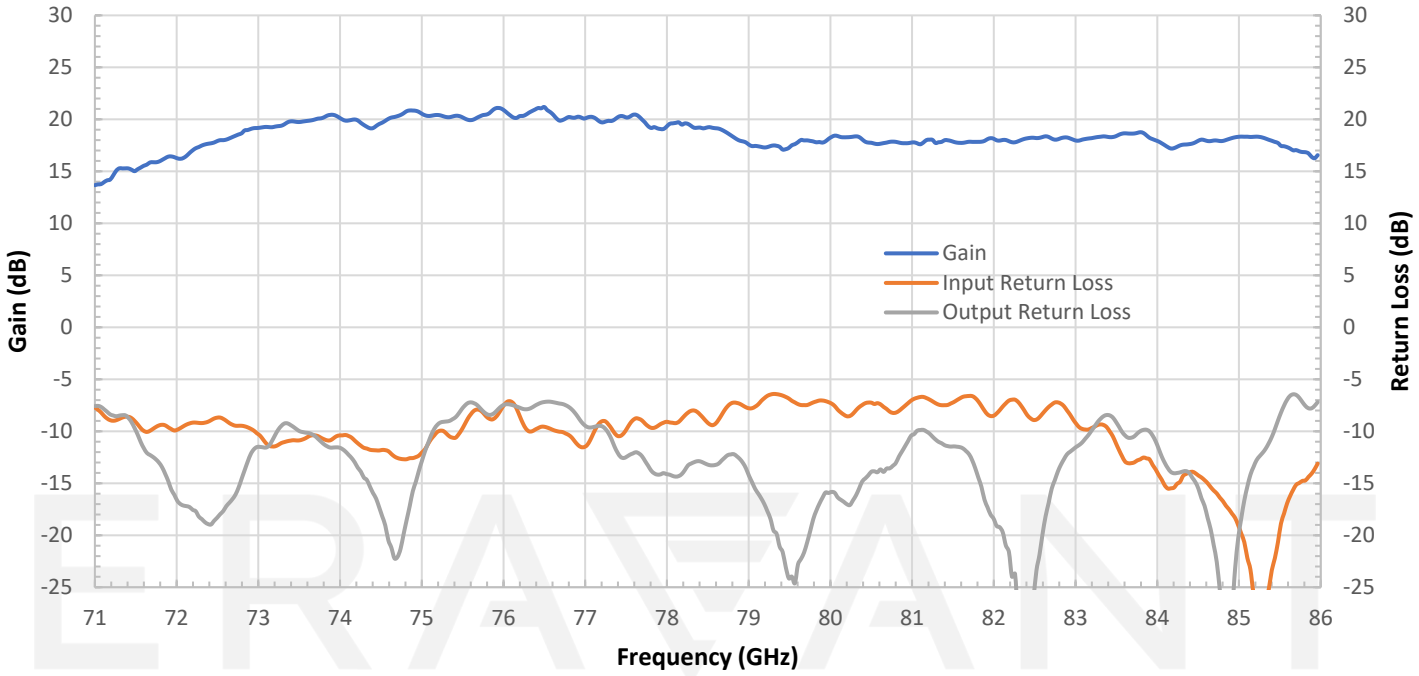
- Low Noise Receivers
- Radar Systems
- Communication Systems

SUPPLEMENTAL DETAILS

Copyright © 2025 by Eravant

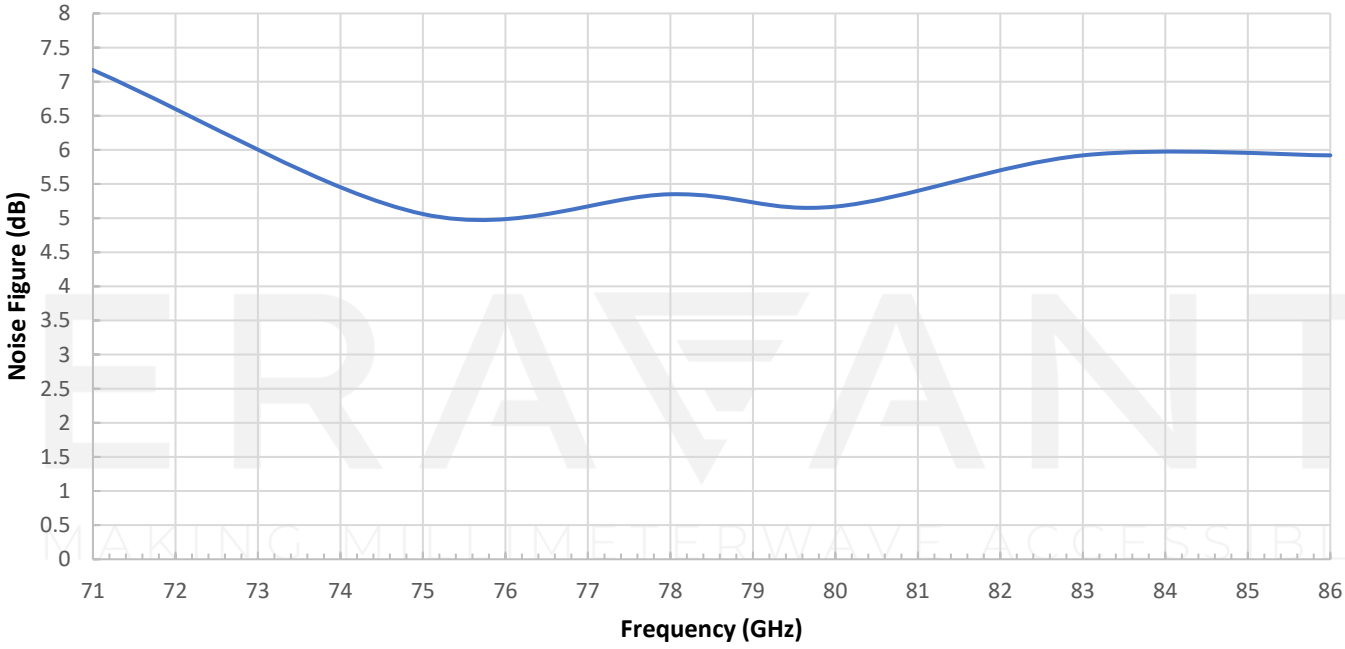
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/28 mA



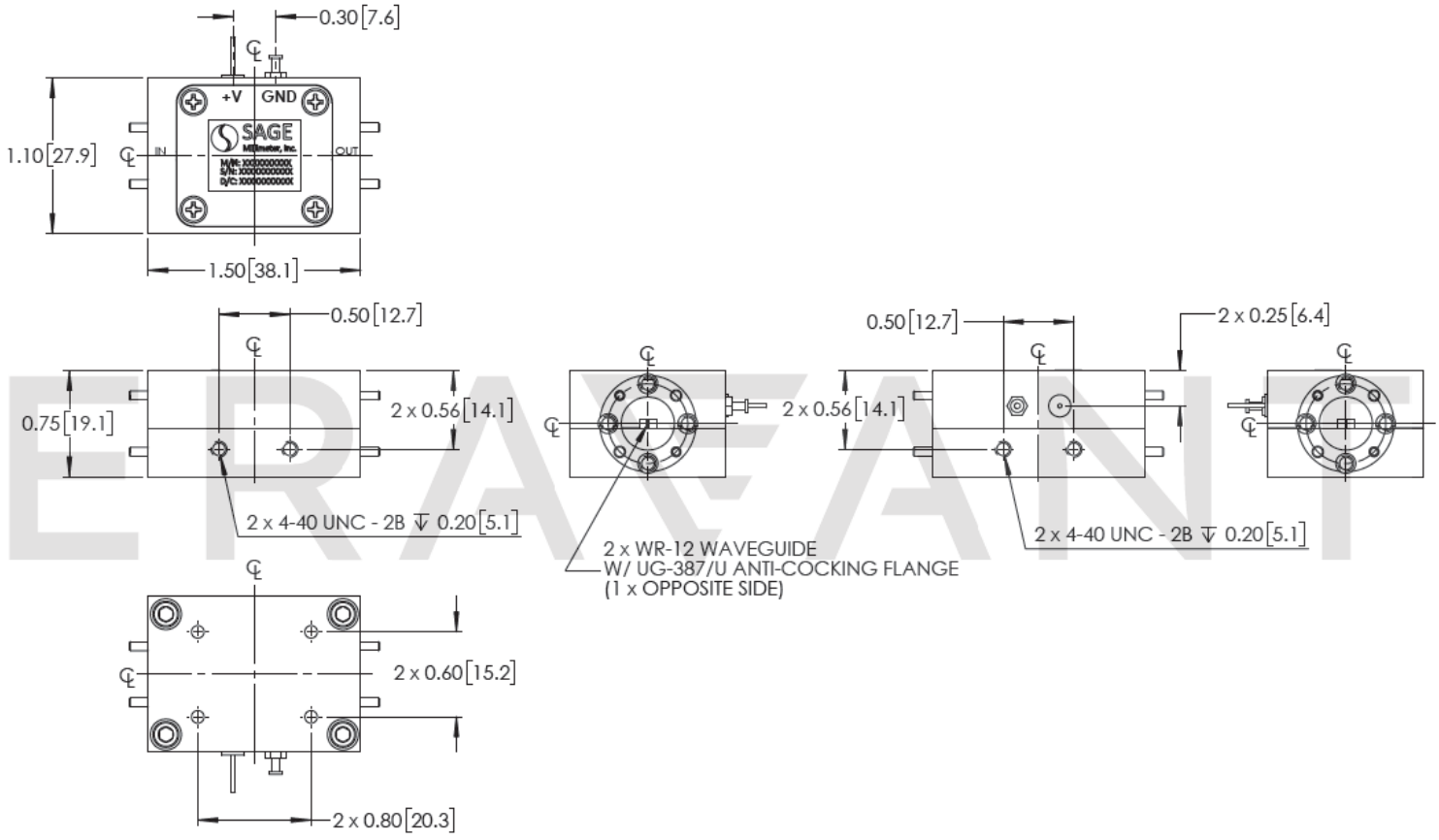
Noise Figure vs. Frequency

Bias: +8V_{DC}/28 mA



Copyright © 2025 by Eravant

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

CAUTION:

- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- Any foreign objects in the device will cause performance degradation and possible device damage.
- 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.

Copyright © 2025 by Eravant