SBL-3535032540-2222-E1-WP

Q-Band Low Noise Amplifier, 33 to 50 GHz, 27 dB Gain, 4.0 dB NF

SBL-3535032540-2222-E1-WP is a low noise amplifier with a typical small signal gain of 27 dB and a nominal noise figure of 4.0 dB across the frequency range of 33 to 50 GHz. The DC power requirement for the amplifier is +6 V_{DC}/330 mA. The mechanical configuration offers an in line structure with WR-22 waveguides and UG-383/U anti-cocking flanges.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	33 GHz		50 GHz
Gain		27 dB	
Noise Figure		4.0 dB	
P_{1dB}		+10 dBm	
P_{Sat}		+14 dBm	
P_{in}			-10 dBm
Input Return Loss		7 dB	
Output Return Loss		7 dB	
DC Voltage	+5 V_{DC}	+6 V_{DC}	+16 V_{DC}
DC Supply Current		330 mA	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

Mechanical Specifications:

Item	Specification
Input	WR-22 Waveguide with UG-383/U Anti-Cocking Flange
Output	WR-22 Waveguide with UG-383/U Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	3.3 Oz
Size	1.18” (W) 1.83” (L) X 1.18” (H)
Outline	BG-SQ-2-A-1.83

ECCN

EAR99

FEATURES

- Full Waveguide Band Coverage
- State-of-the-Art Noise Figure

APPLICATIONS

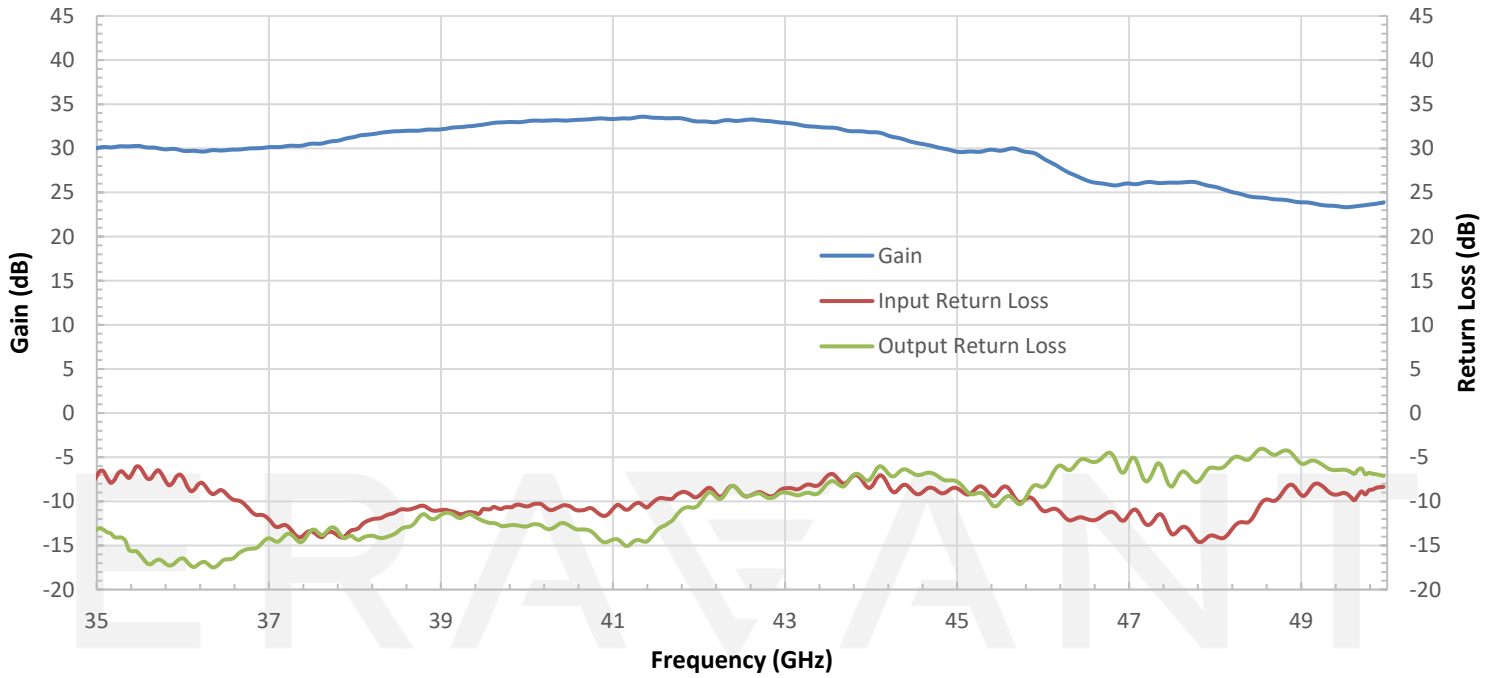
- Radar Systems
- Communication Systems
- Low Noise Receivers

SUPPLEMENTAL DETAILS

Copyright © 2023 by Eravant

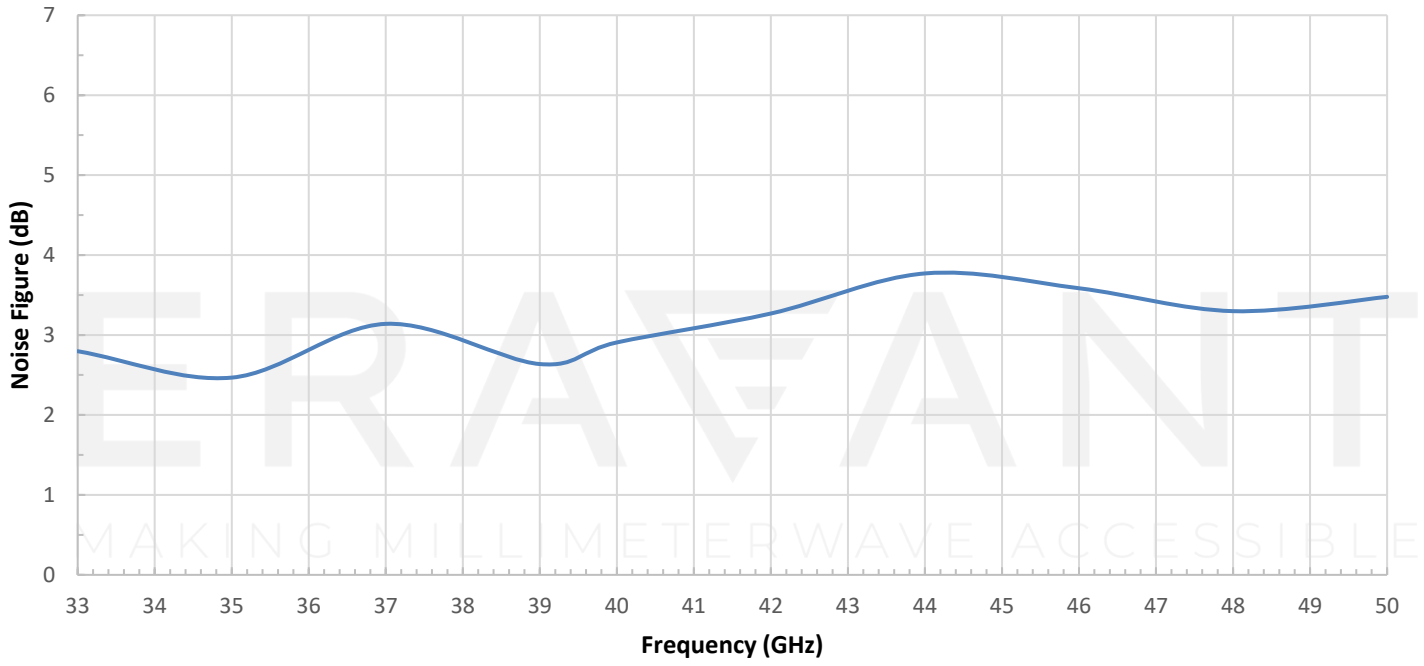
Gain and Return Loss vs. Frequency

Bias: +6 V_{DC}/288 mA



Noise Figure vs. Frequency

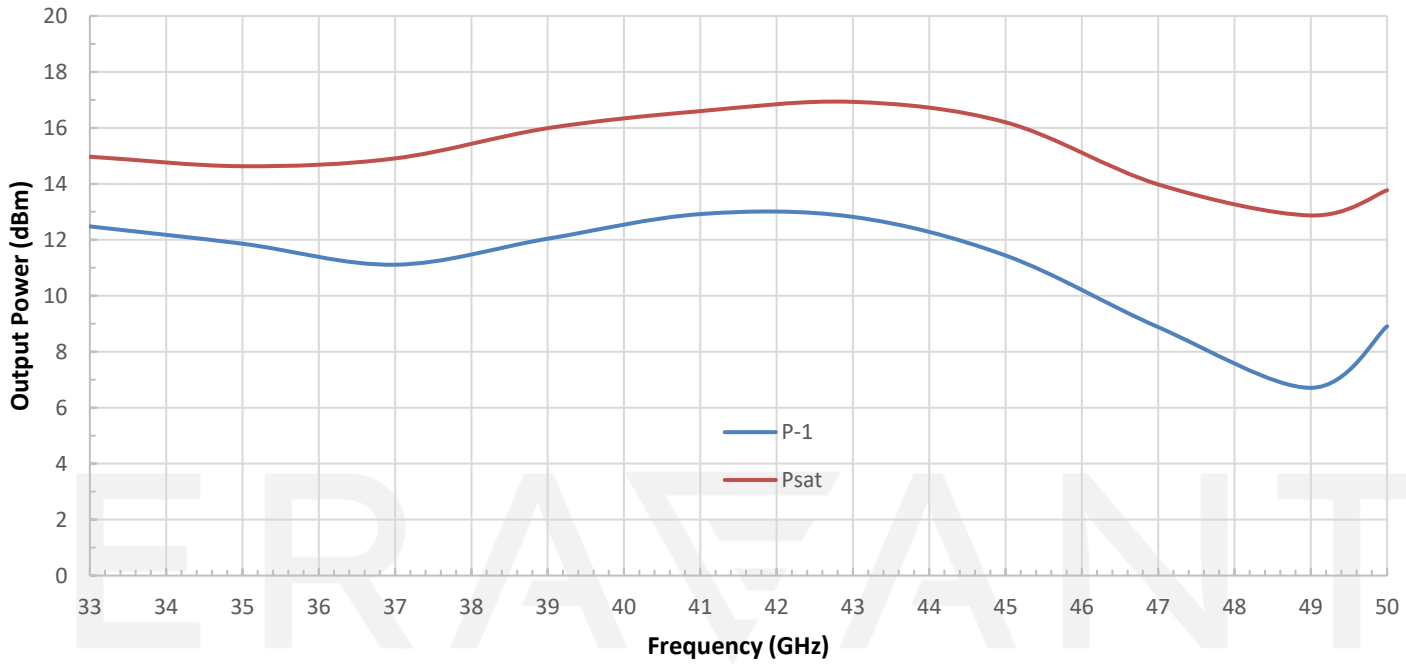
Bias: +6V_{DC}/288 mA



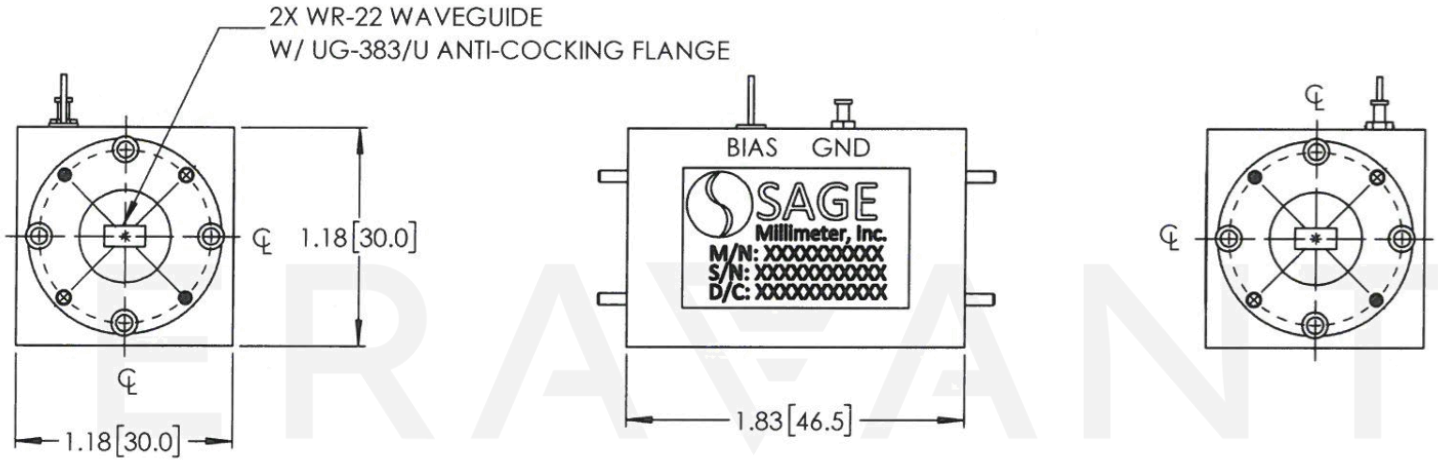
Copyright © 2026 by Eravant

Output Power vs. Frequency

Bias: +6 V_{DC}/288 mA



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



MAKING MILLIMETERWAVE ACCESSIBLE

Copyright © 2026 by Eravant

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

ERAVANT
MAKING MILLIMETERWAVE ACCESSIBLE

ERAVANT
MAKING MILLIMETERWAVE ACCESSIBLE

Copyright © 2026 by Eravant