SBL-2042242080-0505-E1

G-Band Low Noise Amplifier, 195 to 220 GHz, 20 dB Gain, 8 dB Noise Figure

SBL-2042242080-0505-E1 is a G-band low noise amplifier with a typical small signal gain of 20 dB and a nominal noise figure of 8.0 dB across the frequency range of 195 to 220 GHz. The DC power requirement for the amplifier is +8 V_{DC}/50 mA. The input and output port configuration offers an inline structure with WR-05 waveguides and UG-387/U-M anti-cocking flanges.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	195 GHz		220 GHz
Gain		20 dB	
Noise Figure		8.0 dB	
P_{1dB}		-5 dBm	
P_{in}			+10 dBm
Input Return Loss		5 dB	
Output Return Loss		5 dB	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+12 V_{DC}
DC Supply Current		50 mA	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

Mechanical Specifications:

Item	Specification
RF Ports	WR-05 Waveguide with UG-387/U-M Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.6 Oz
Size	1.40” (L) X 1.00” (W) X 0.75” (H)
Outline	BG-SG-2-A

ECCN

3A001.b.4

FEATURES

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

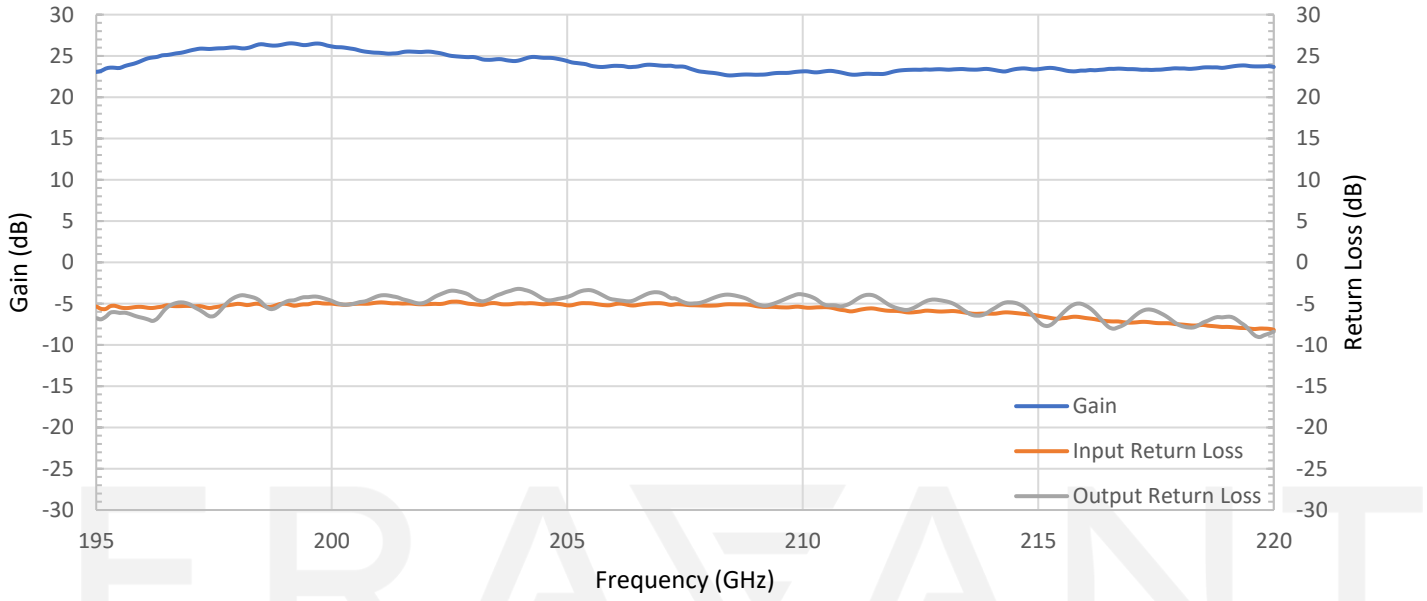
APPLICATIONS

- 6G Systems

SUPPLEMENTAL DETAILS

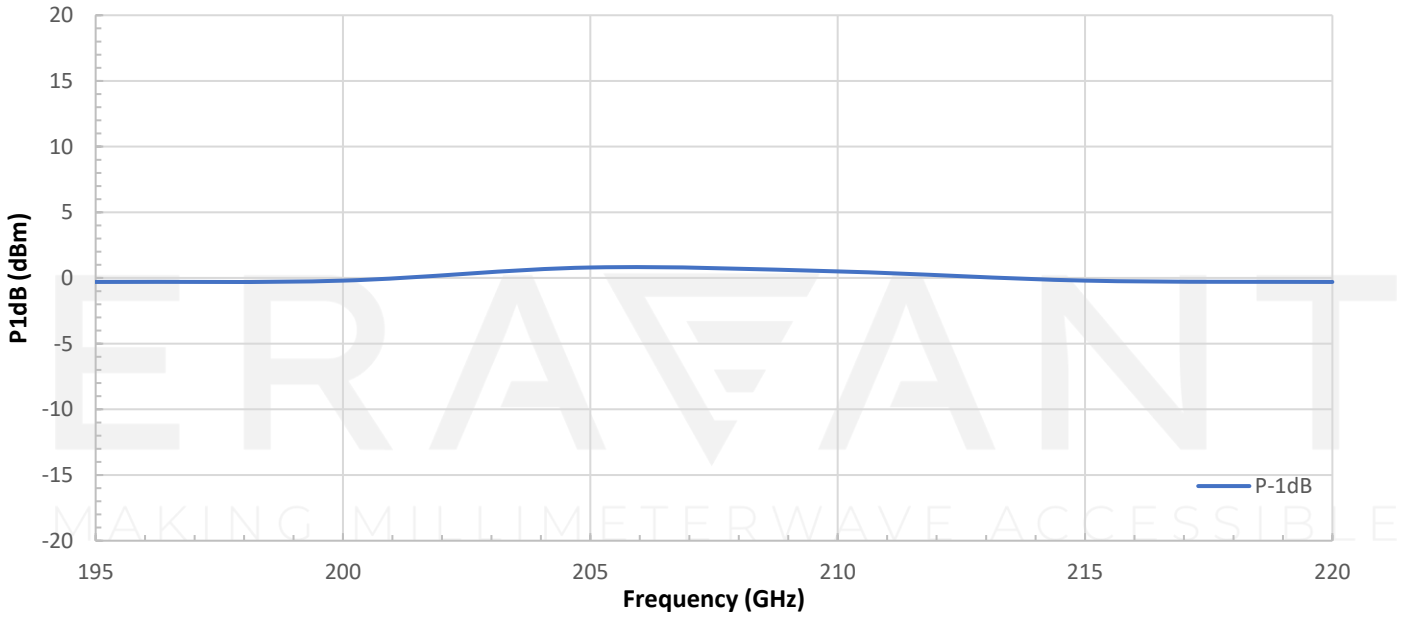
Typical Gain and RL vs Frequency

Bias: +8 V_{DC}/38mA



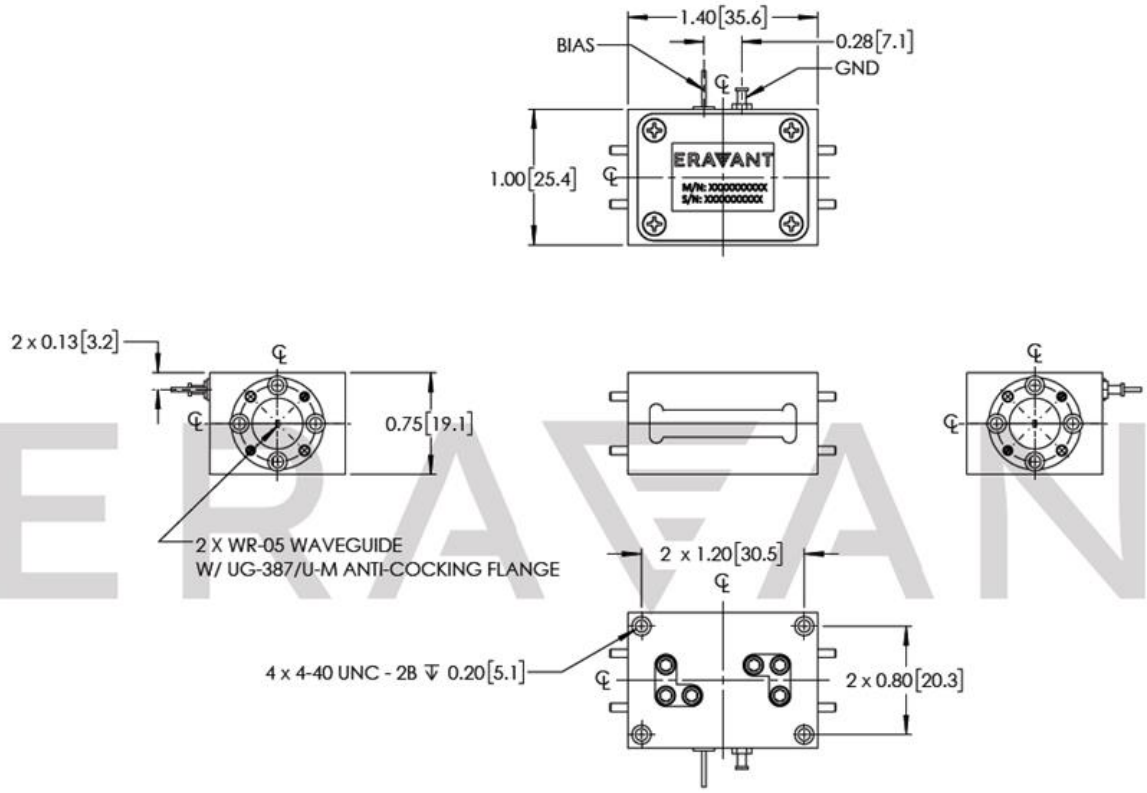
Typical P-1dB vs. Frequency

Bias: +8V_{DC}/38 mA



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.
- 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.
- Any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- The case temperature of the device shall never exceed +50°C. Use proper heatsink or fan if necessary.