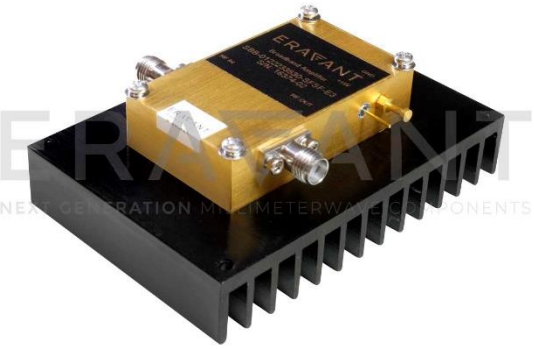
SBB-0122233530-SFSF-E3

Broadband Amplifier, 0.1 to 22 GHz , 35 dB Gain, +30 dBm P_{1dB}

SBB-0122233530-SFSF-E3 is a broadband amplifier with a typical small signal gain of 35 dB, a nominal P_{1dB} of +30 dBm across the frequency range of 0.1 to 22 GHz. The broadband power amplifier is based on advanced GaN device technology. The amplifier has built-in voltage regulator so that only single positive bias voltage is required. The DC power requirement for the amplifier is +18 V_{DC}/850 mA. The RF connectors are female SMA connectors. Other port configurations are available under different model numbers.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	0.1 GHz		22 GHz
Gain		35 dB	
P_{1dB}		+30 dBm	
P_{sat}		+32 dBm	
Noise Figure		5 dB	
P_{in}			+5 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage		+18 V_{DC}	+20 V_{DC}
DC Supply Current		850 mA	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

Mechanical Specifications:

Item	Specification
Input Port	SMA (F)
Output Port	SMA (F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.73 Oz
Size	3.15” (L) x 2.20” (W) x 1.06” (H)
Outline	BG-ZC-2-H

ECCN

EAR99

FEATURES

- Broadband Coverage
- High Output Power
- Extreme Gain Flatness

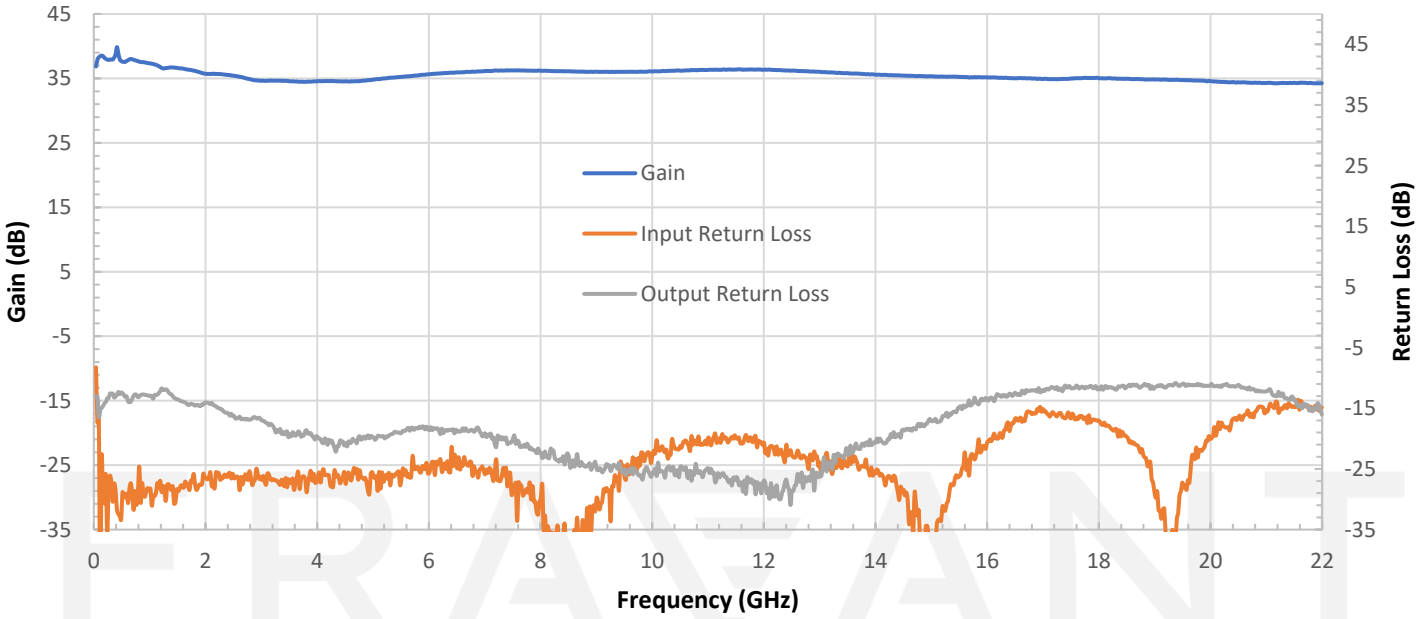
APPLICATIONS

- Radar Systems
- Communication Systems
- Test Equipment

SUPPLEMENTAL DETAILS

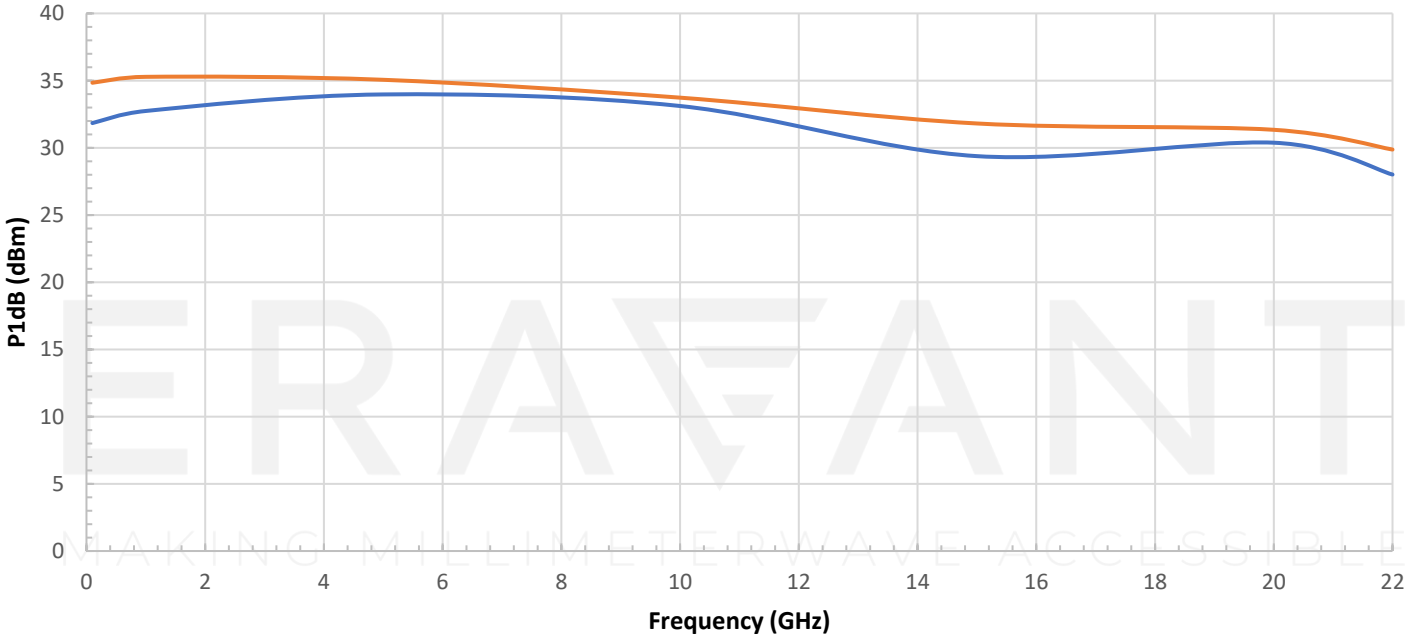
Gain and Return Loss vs. Frequency

Bias: +18V_{DC}/833 mA



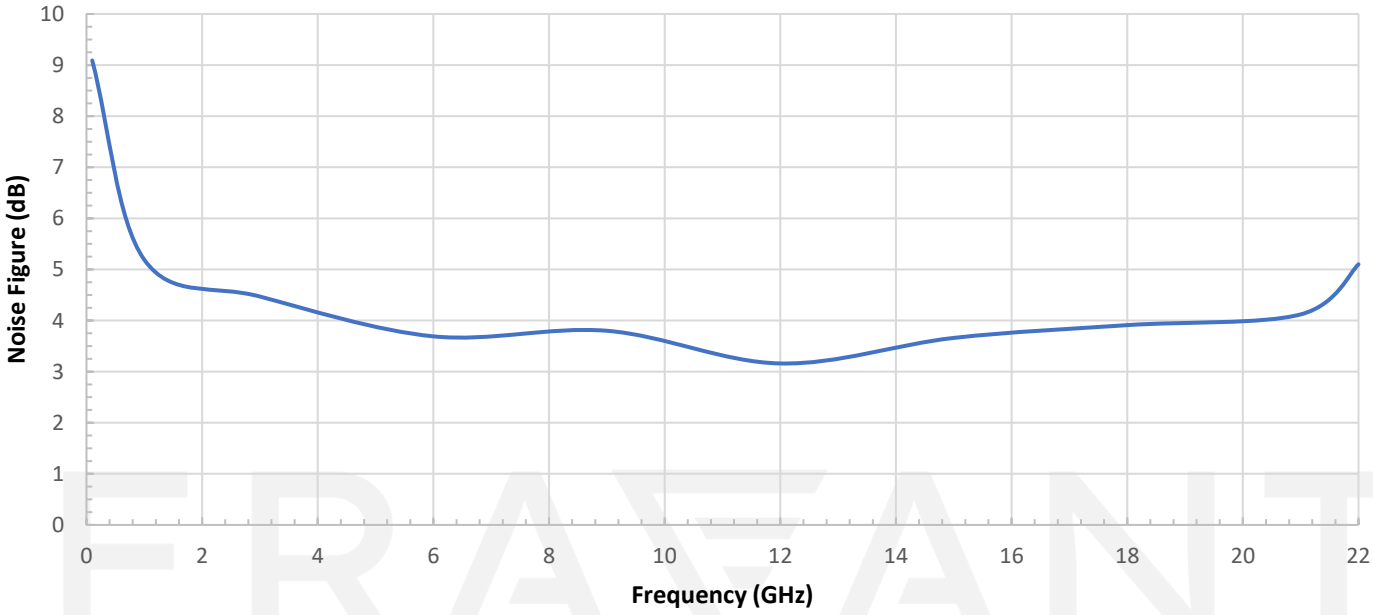
P1dB vs. Frequency

Bias: +18V_{DC}/1.051A

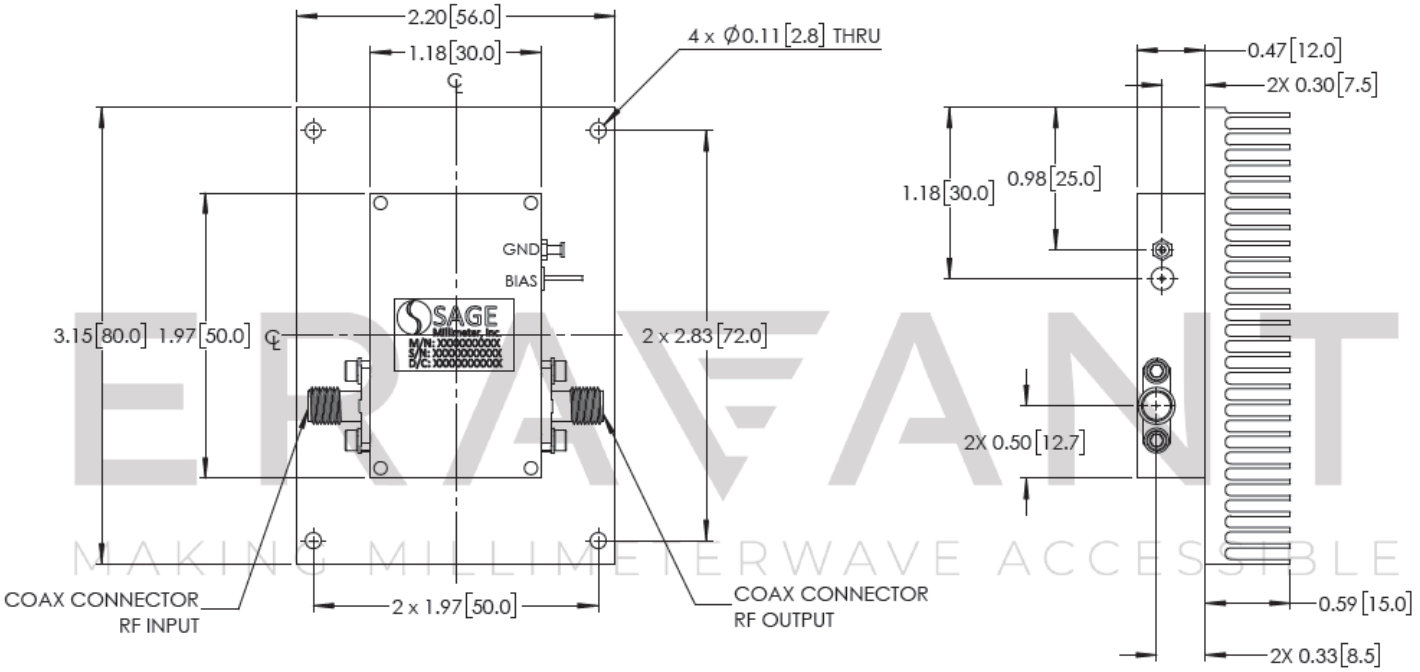


Noise Figure vs. Frequency

Bias: +18V_{DC}/833 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.
- On condition that simulated test data is provided, actual measured data may slightly vary.
- 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 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.
- For 1 mm connectors proper torque should be applied: 4.0 ± 0.15 inch-pounds (0.45 ± 0.02 Nm). Torque wrench model SCH-06004-S1 is highly recommended.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model SCH-08008-S1 is highly recommended.

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