



## Broadband Amplifier, 10 MHz to 50 GHz, 25 dB Gain, +18 dBm P<sub>1dB</sub>

### Description:

**Model STB-0115032518-2F2F-S1** is a broadband benchtop driver amplifier with a typical small signal gain of 25 dB and a nominal P<sub>1dB</sub> of +18 dBm across the frequency range of 10 MHz to 50 GHz. The power supply required is a single phase AC voltage in the range of 100 to 240 V<sub>AC</sub>, which can be supplied by a wall outlet. The LED light helps to indicate the working status of the amplifier. The input and output port configurations are both female K connectors.



### Features:

- Ultra-Broadband Coverage
- Good Gain Flatness

### Applications:

- Bench Top Power Amplification
- Antenna Range
- Power Boosting

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	0.01 GHz		50.00 GHz
Gain		25 dB	
P <sub>1dB</sub>		+18 dBm	
P <sub>sat</sub>		+19 dBm	
Noise Figure		6.0 dB	
RF Input Damage Level			-18 dBm
Input Return Loss		6 dB	
Output Return Loss		6 dB	
Power Supply (AC Adapter Provided)	100 V <sub>AC</sub>		240 V <sub>AC</sub>
Specification Temperature		+25 °C	
Case Temperature	0 °C		+50 °C

### Mechanical Specifications:

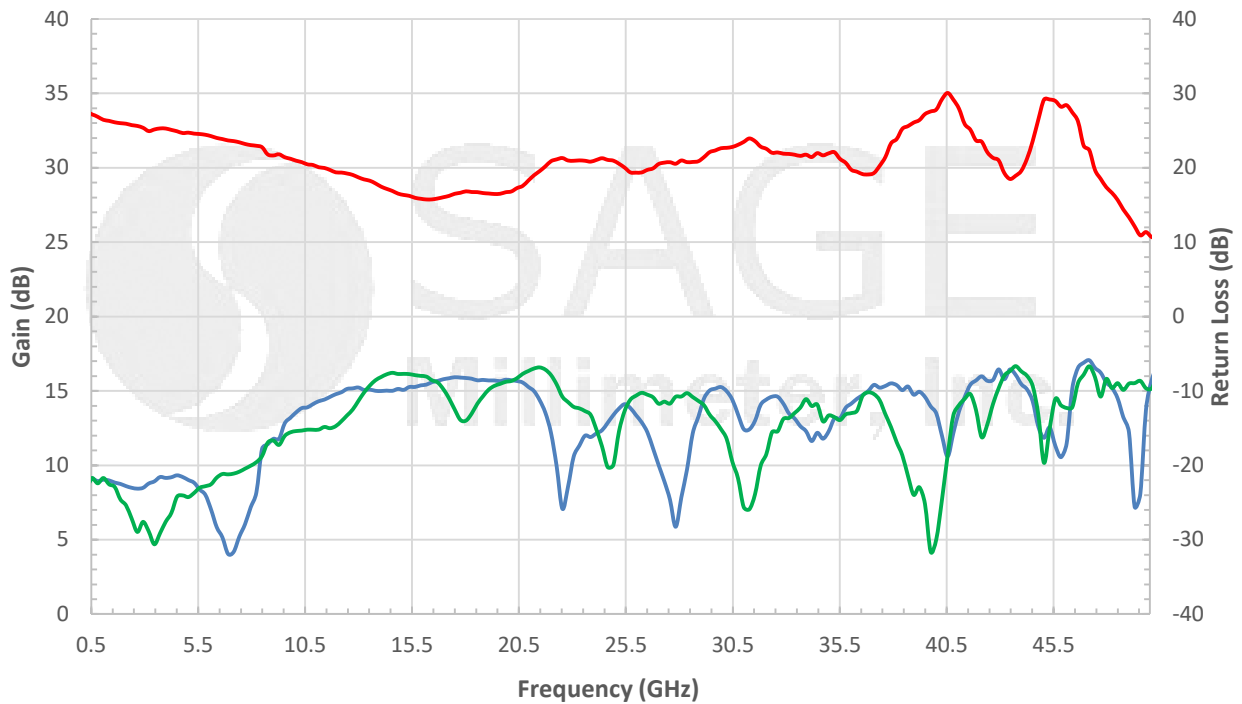
Item	Specification
Input	2.4 mm (F)
Output	2.4 mm (F)
DC Bias	2.5 mm DC Jack (AC-to-DC power converter included)
DC Bias Switch	On-Off Rocker Switch with Indicator Light
Enclosure Material	Extruded Aluminum
Finish	Black Anodized
Weight	3 lbs
Size	4.72" (W) x 5.51" (L) x 2.81" (H)
Outline	TB-SC



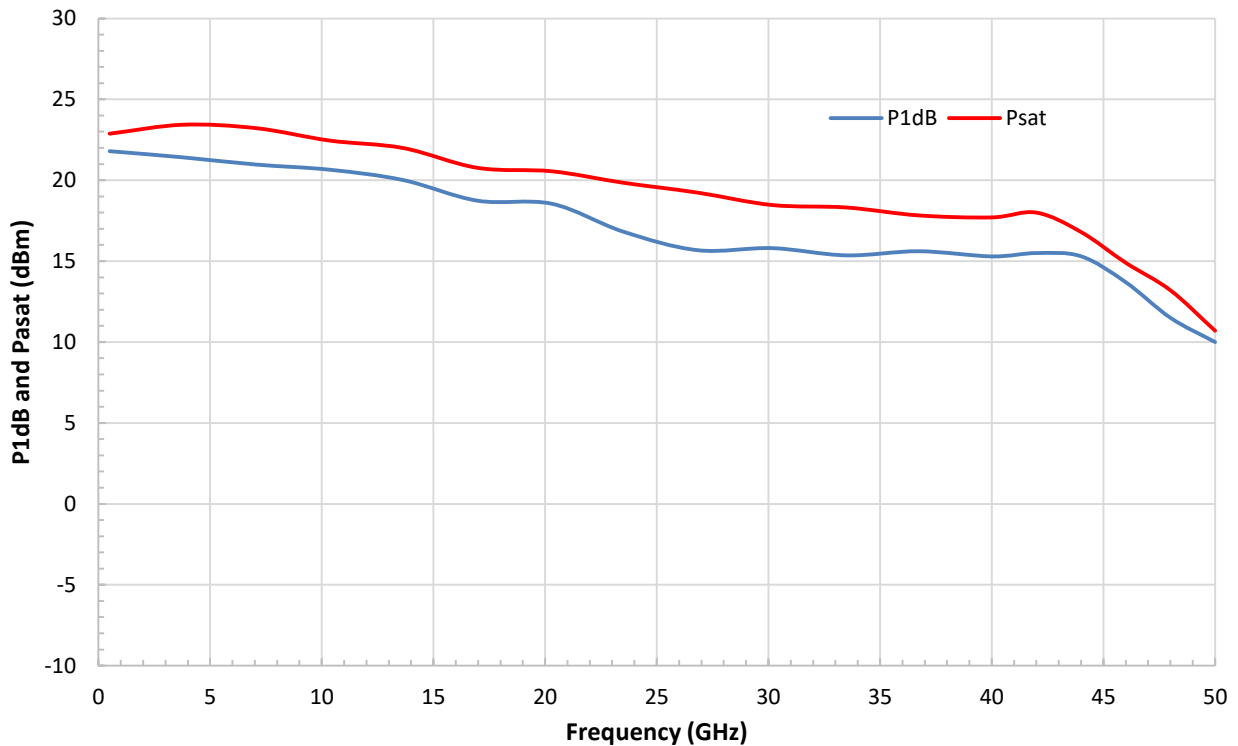


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### Typical Performance vs. Frequency



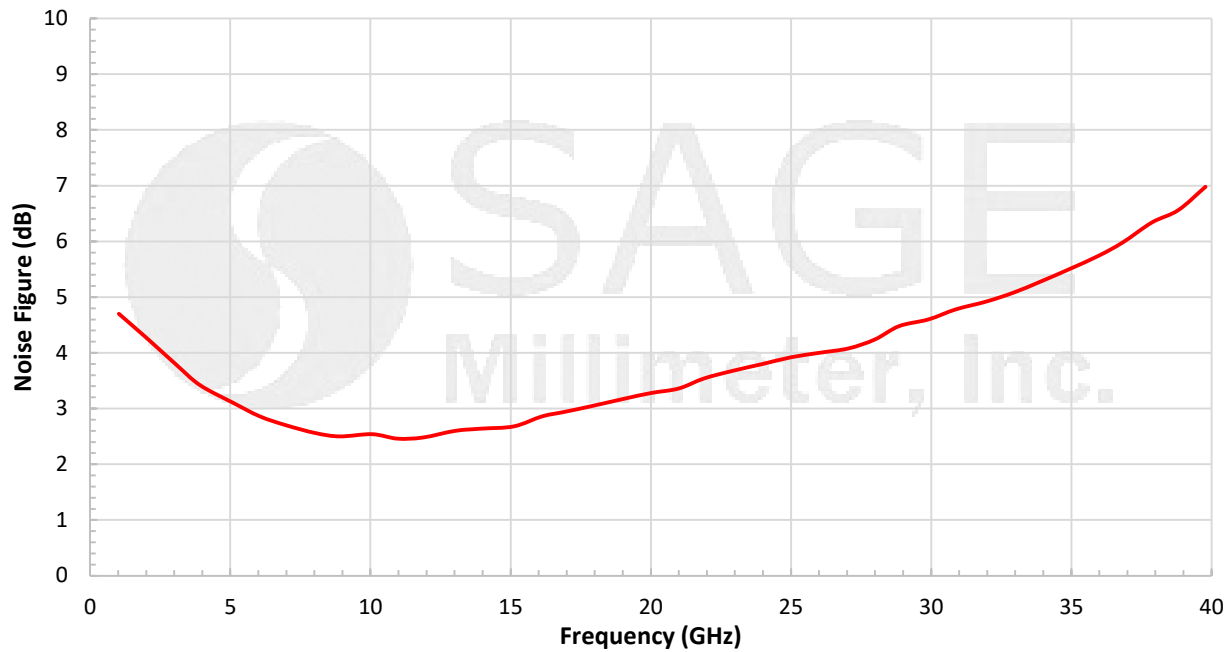
### Typical Output Power vs. Frequency



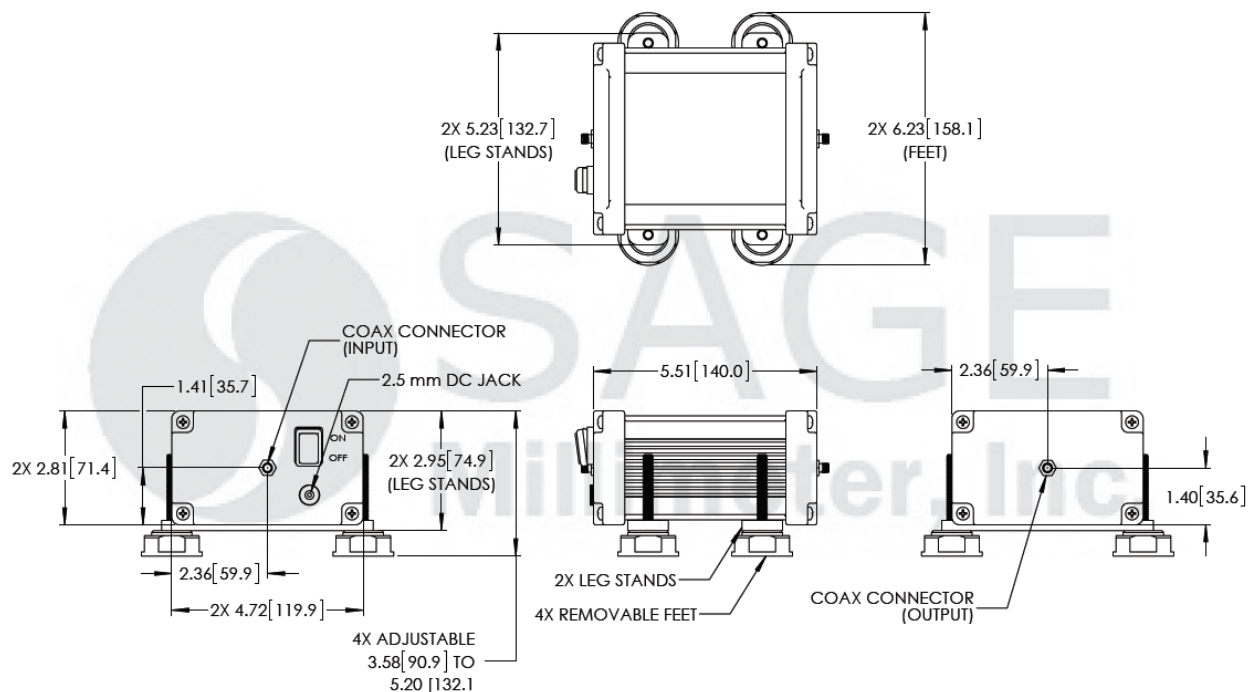


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### Typical Noise Figure vs. Frequency



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





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### 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.
- AC-to-DC power converter with cord is included.
- Other mechanical configurations are available under different model numbers.
- SAGE Millimeter, Inc. 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.
- Proper torque,  $8.0 \pm 0.15$  inch-pounds ( $0.92 \pm 0.05$  Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

