SBP-3735533527-1919-E1-HR

37 to 55 GHz Power Amplifier, 35 dB Gain, +27 dBm P1dB

SBP-3735533527-1919-E1-HR is a power amplifier with a typical small signal gain of 35 dB and a nominal P_{1dB} of +27 dBm across the frequency range of 37 to 55 GHz. The DC power requirement for the amplifier is +8 V_{DC}/6 A. The mechanical configuration offers an inline structure with WR-19 UniGuide™ waveguides. Other port configurations, such as 2.4 mm connectors and 1.85 mm connectors for either the input or output port, are also available under different model numbers.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	37 GHz		55 GHz
Gain		35 dB	
P_{1dB}		+27 dBm	
P_{sat}		+30 dBm	
P_{in}			+5 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+12 V_{DC}
DC Supply Current (Under RF Drive)		6 A	
Supply Voltage to Fan		+12 V_{DC}	
Specification Temperature		+25˚C	
Operating Temperature	0˚C		+50˚C

Mechanical Specifications:

Item	Specification
Input	WR-19 Uni-Guide™ Waveguides with UG-383/U-M Anti-Cocking Flanges
Output	WR-19 Uni-Guide™ Waveguides with UG-383/U-M Anti-Cocking Flanges
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.42 lb
Size	3.15” (L) X 3.15” (W) X 3.90” (H)
Outline	BG-SU-2-A-BR-H95

ECCN

3A001.b.4

FEATURES

- High Output Power and Gain

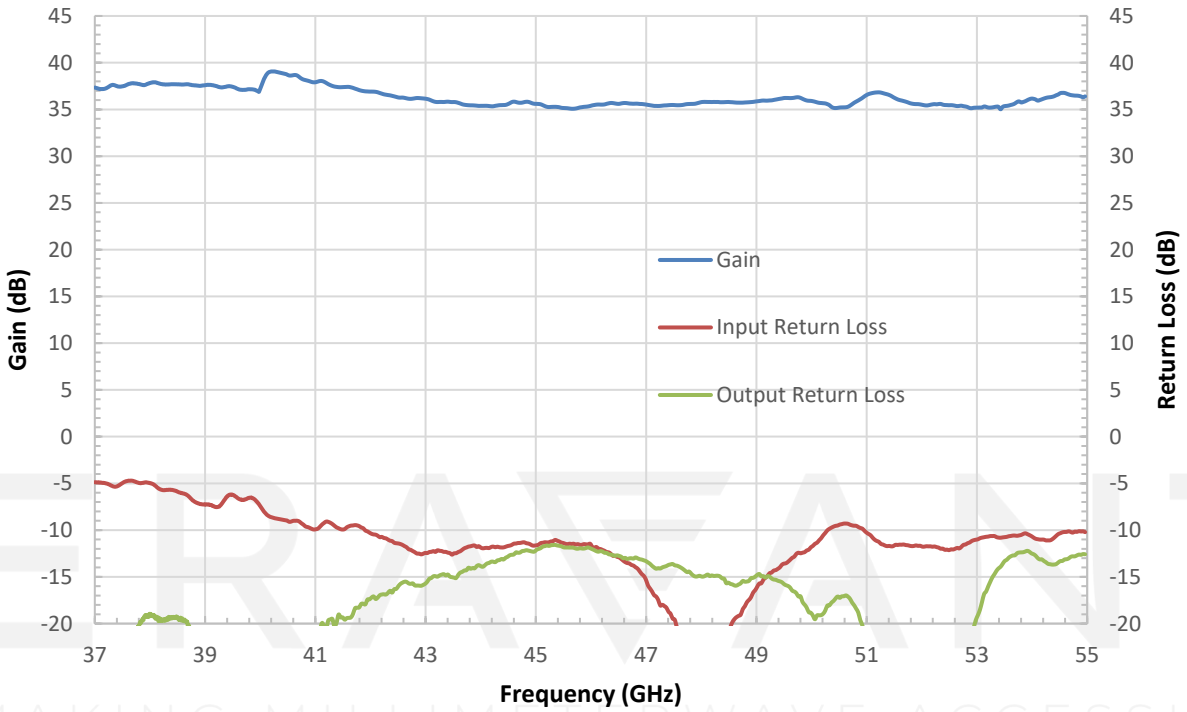
APPLICATIONS

- 5G System
- Starlink
- Milstar

SUPPLEMENTAL DETAILS

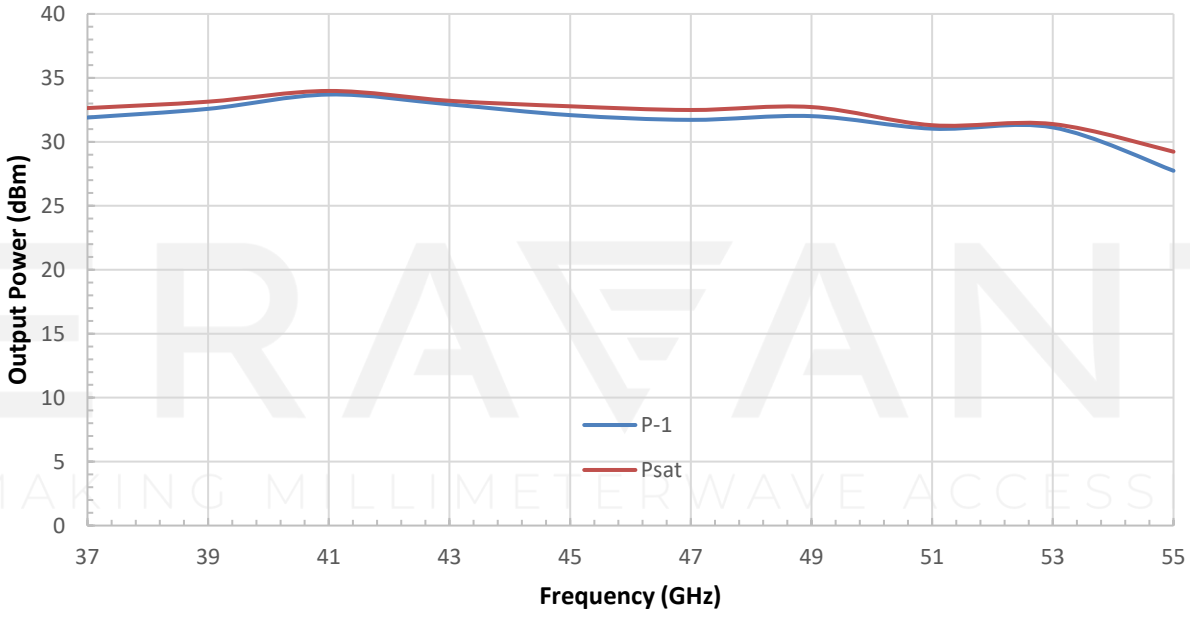
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/4400 mA

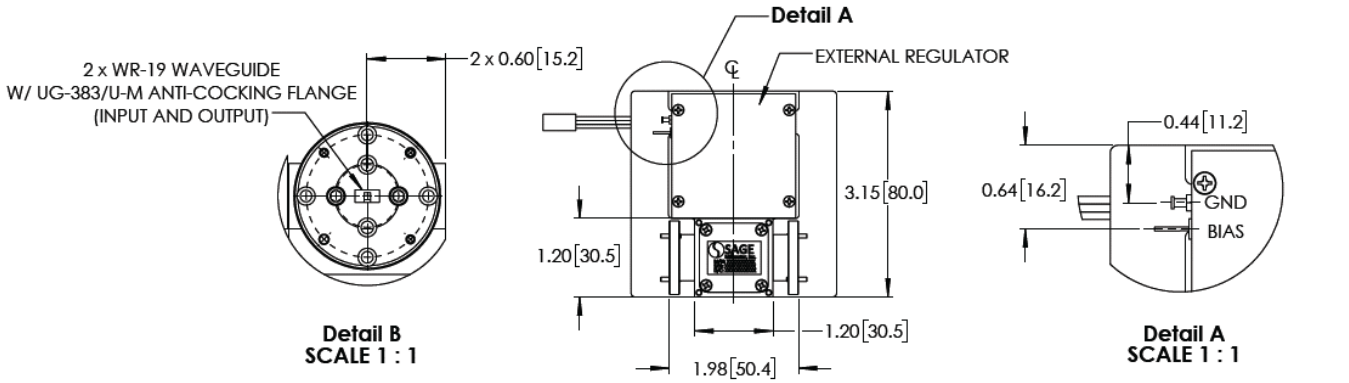


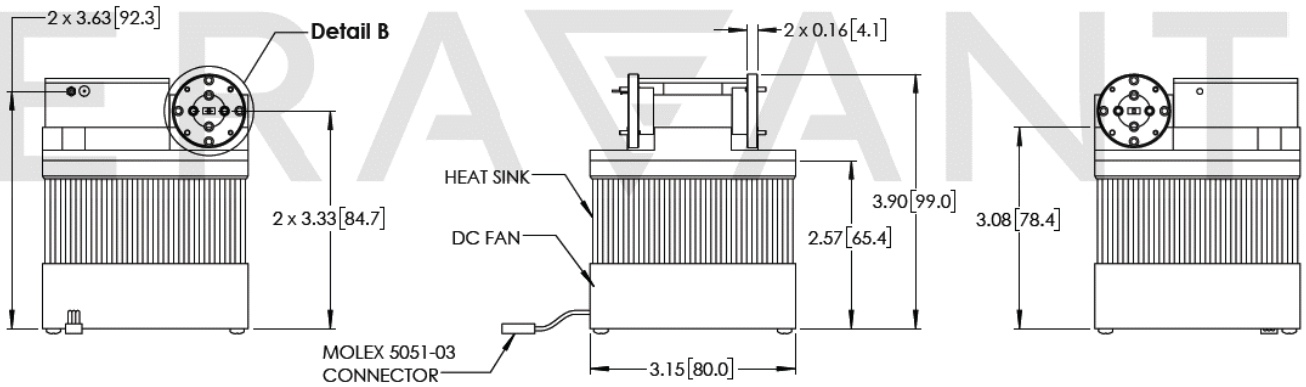
Output Power vs. Frequency

Bias: +8 V_{DC}/6.2A RF Sat



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





MOLEX - 5051-03	
WIRE	**SIGNAL**
BLACK	GND
RED	+12 VDC
YELLOW	TACH

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.
- The amplifier employs Eravant's trademarked and patent pending technology, Uni-Guide™, as its waveguide interfaces. The orientation of the input and the output waveguides can be specified through corresponding model numbers. For example, the model number for a horizontal output waveguide configuration would be SBP-3735533527-1919H-E1-HR instead of the default SBP-3735533527-1919-E1-HR which indicates vertical orientation output.
- 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 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.
- Any foreign objects in the waveguide will cause performance degradation and may damage the device.