

SBP-4735233430-1919-EP

U-Band Power Amplifier, 47 to 52 GHz, 34 dB Gain, +30 dBm P_{sat}

SBP-4735233430-1919-EP is a U-Band GaN power amplifier with a typical small signal gain of 34 dB and a nominal P_{sat} of +30 dBm across the frequency range of 47 to 52 GHz. The DC power requirement for the amplifier is +28 V_{DC}/0.5 A. The mechanical configurations is an inline structure with WR-19 waveguide with UG-383/U-M Anti-Cocking Flange as its input port and output port. Other port configurations, such as 2.4 mm connectors and WR-19 waveguides for either the input or output port, are also available under different model numbers.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	47 GHz		52 GHz
Small Signal Gain		34 dB	
Power Gain		30 dB	
P_{sat}		+30 dBm	
P_{in}			+10 dBm
Input Return Loss		10 dB	
Output Return Loss without Damage		5 dB	
DC Supply Voltage (VDD)	+26 V _{DC}	+28 V _{DC}	+32 V _{DC}
DC Supply Current		0.5 A	
Supply Voltage to Fan		+12 V _{DC} /0.6 A	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Input	WR-19 Waveguide with UG-383/U-M Anti-Cocking Flange
Output	WR-19 Waveguide with UG-383/U-M Anti-Cocking Flange
Power Supply	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Size	3.15" (L) X 2.99" (W) X 3.92" (H)
Outline	BP-HU-H1

ECCN

3A001.b.4

FEATURES

- Class AB GaN Technique
- Broadband Performance
- High Gain
- High Output Power
- Forced Air Cooling
- In-line Port Configuration

APPLICATIONS

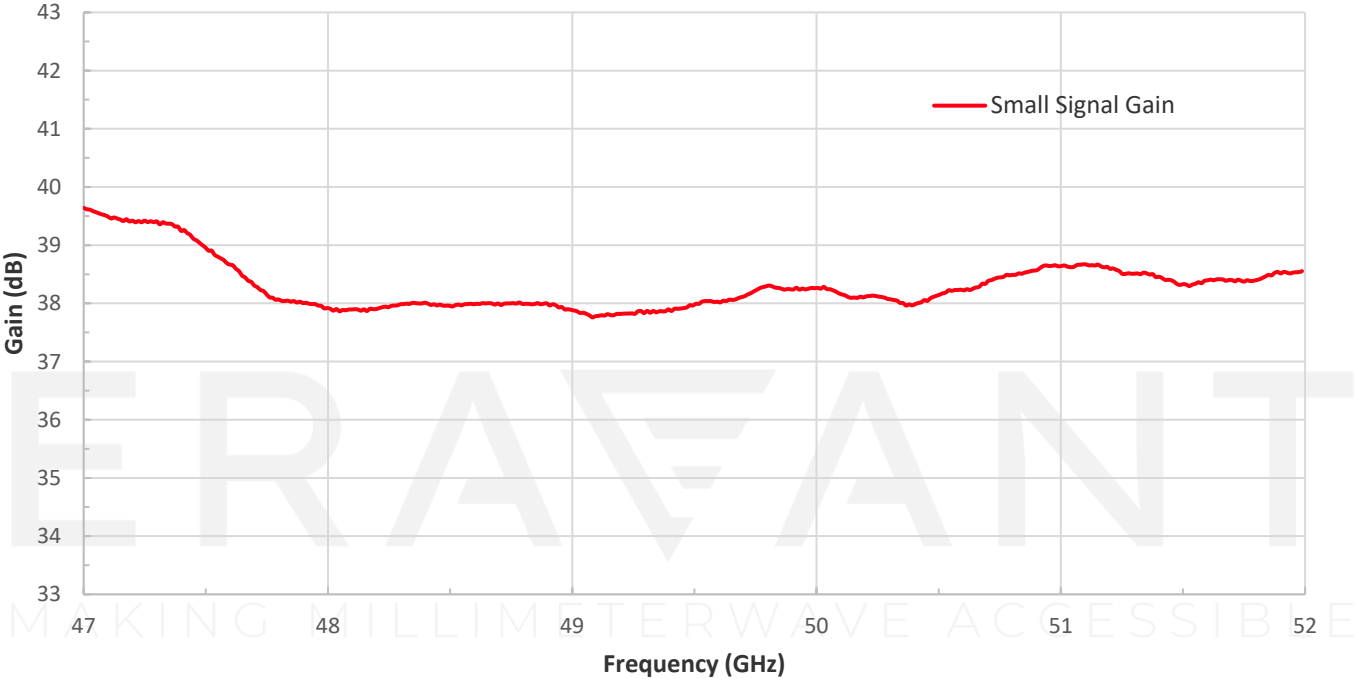
- Starlink
- Radar Systems
- 5G Systems

SUPPLEMENTAL DETAILS



Typical Gain vs. Frequency

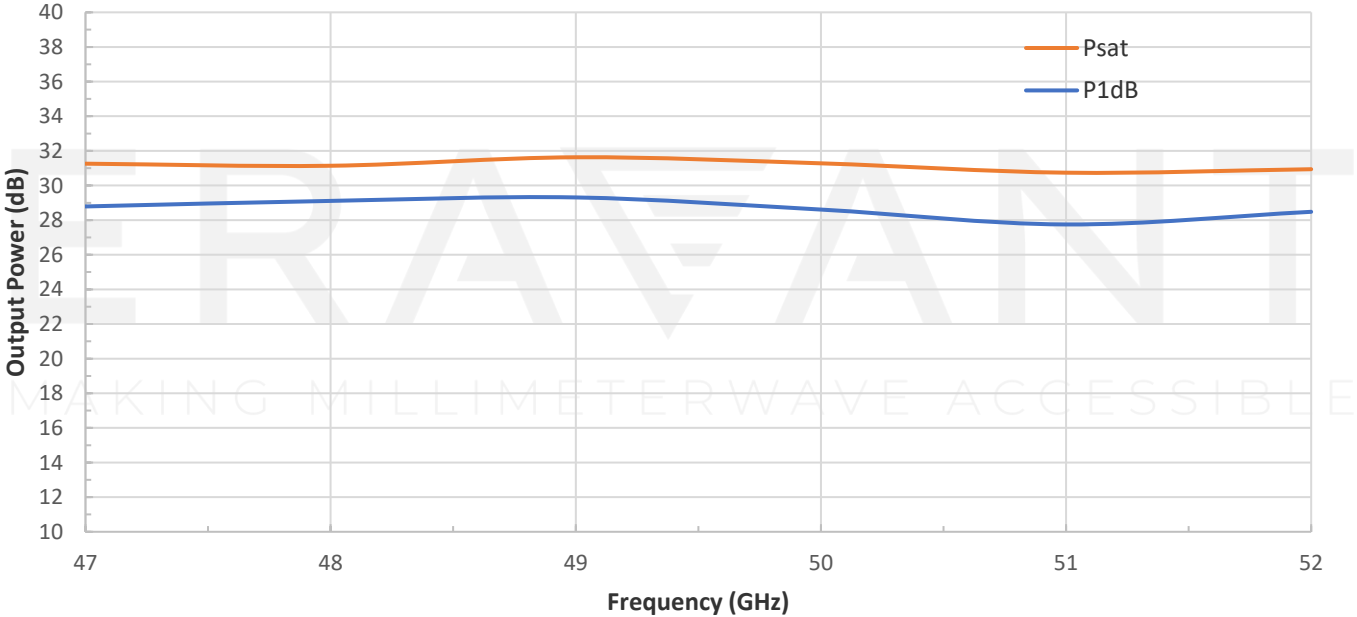
Bias: +28 V_{DC}/ 378 mA



Typical P_{SAT} vs. Frequency

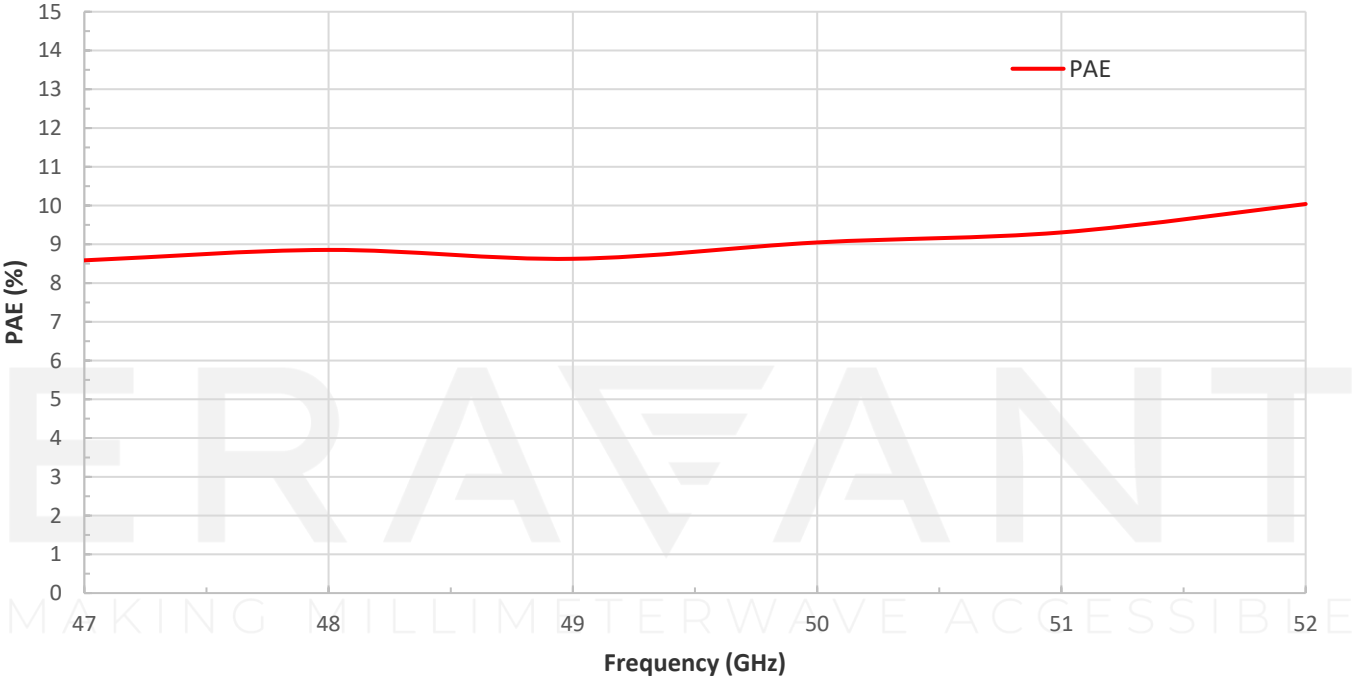
Bias: +28 V_{DC}/ 382 mA

RFsat: +28 V_{DC}/ 412 mA



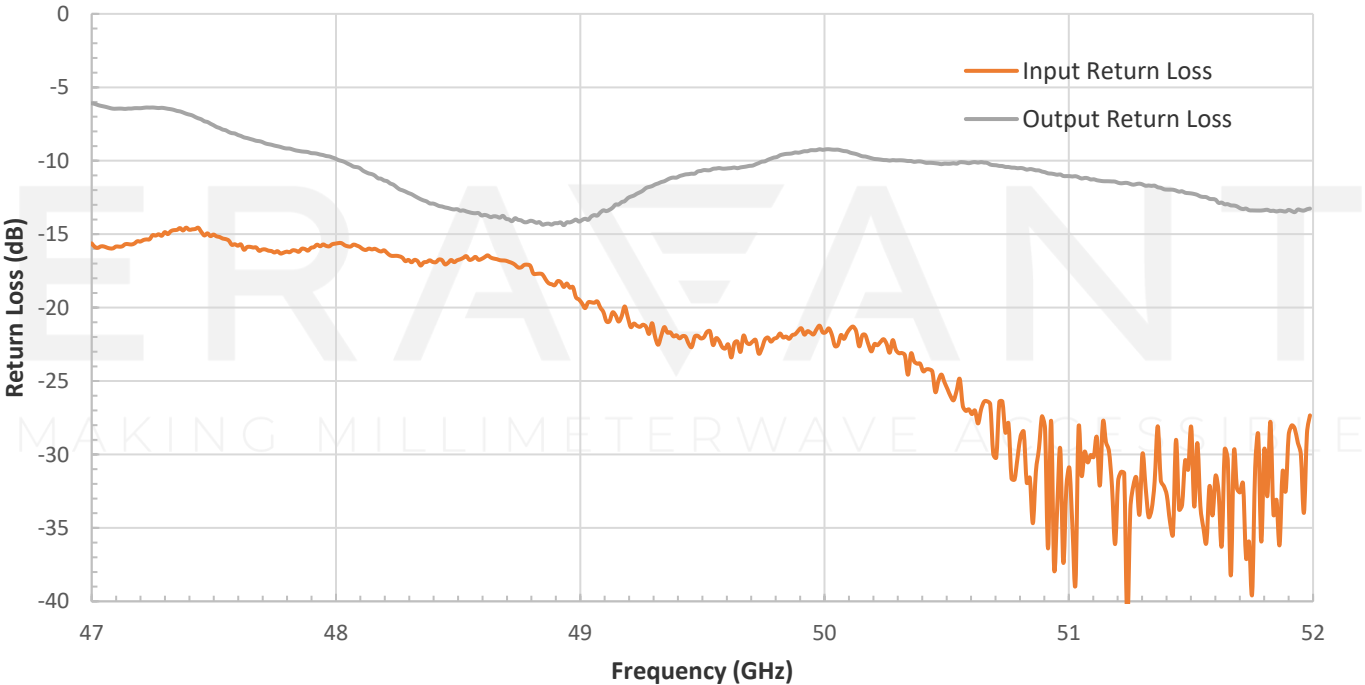
Typical PAE vs. Frequency

Bias: +28 V_{DC}/ 412 mA



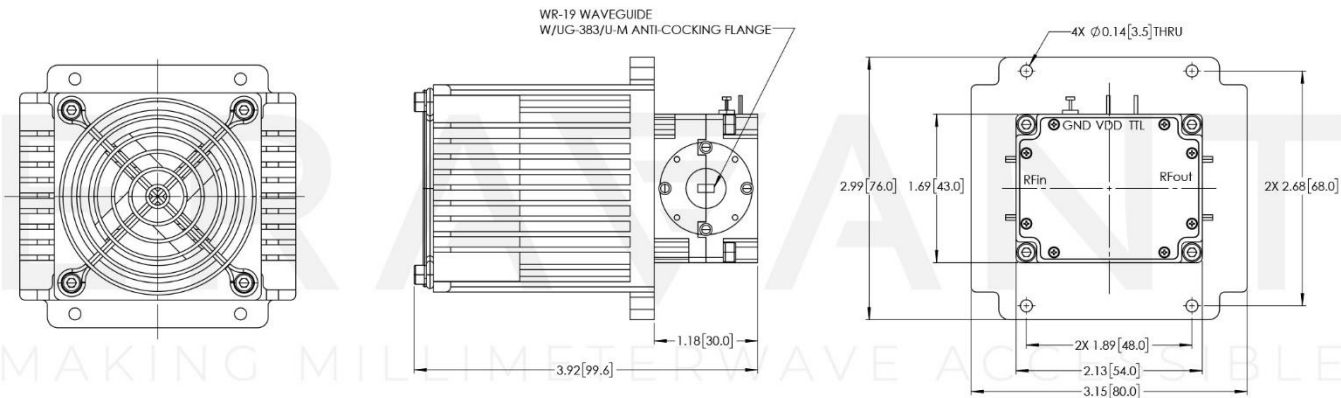
Typical Return Loss vs. Frequency

Bias: +28 V_{DC}/ 382 mA



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



WIRE COLOR	FUNCTIONS
RED	+12V
BLACK	GND
YELLOW	TACH SIGNAL (OPTIONAL)
BLUE	PWM (OPTIONAL)

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.
- 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.
- Do not block the air inlets and outlets.
- The device is static sensitive. Always follow ESD rules when working with the device.
- Do not plug or unplug any connectors when amplifier is activated. All connectors must be connected/disconnected when amplifier is off.
- 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 degrade performance and/or damage the device.