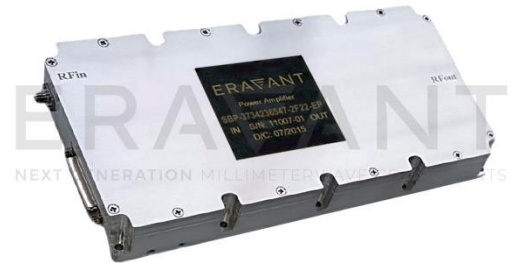


SBP-4334635447-2F22-EP

43 to 46 GHz Power Amplifier, 54 dB Gain, +47 dBm P_{sat}

SBP-4334635447-2F22-EP is a power amplifier with a typical small gain of 54 dB and a nominal P_{sat} of +47 dBm across the frequency range of 43 to 46 GHz. The DC power requirement for the amplifier is +24 V_{DC}/15 A. The mechanical configurations is an inline structure with 2.4 mm (F) connector as its input port and WR-22 waveguide with UG-383/U Anti-Cocking Flange as output port. Other port configurations, such as 2.4 mm (M) connectors and WR-22 waveguides for either the input or output port, are also available under different model numbers.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	43 GHz		46 GHz
Small Signal Gain		54 dB	
Power Gain		45 dB	
Gain Flatness		±2 dB	
P _{sat}		+47 dBm	
P _{in}			+12 dBm
Input Return Loss		15 dB	
Output Return Loss		5 dB	
DC Supply Voltage (VDD)	+22 V _{DC}	+24 V _{DC}	+26 V _{DC}
DC Supply Current		15 A	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Item	Specification
Package	Hermetically Sealed
RF Input	2.4 mm Female
RF Output	WR-22 Waveguide with UG-383/U Anti-Cocking Flange
Power Supply & Control	D-SUB13W3
Case Material	Aluminum
Finish	Chem Film, Clear
Weight	4.2 lbs (1.9 kg)
Size	10.63" (L) X 5.12" (W) X 1.38" (H)
Outline	BP-HC-CW1

ECCN

3A001.b.4

FEATURES

- Class AB GaN Technique
- Broadband Performance
- High Gain
- High Output Power
- Hermetically Sealed
- Input/Output Power Detector
- High VSWR Protection
- Overtemperature Protection

APPLICATIONS

- Radar Systems
- Communication Systems
- Test Equipment

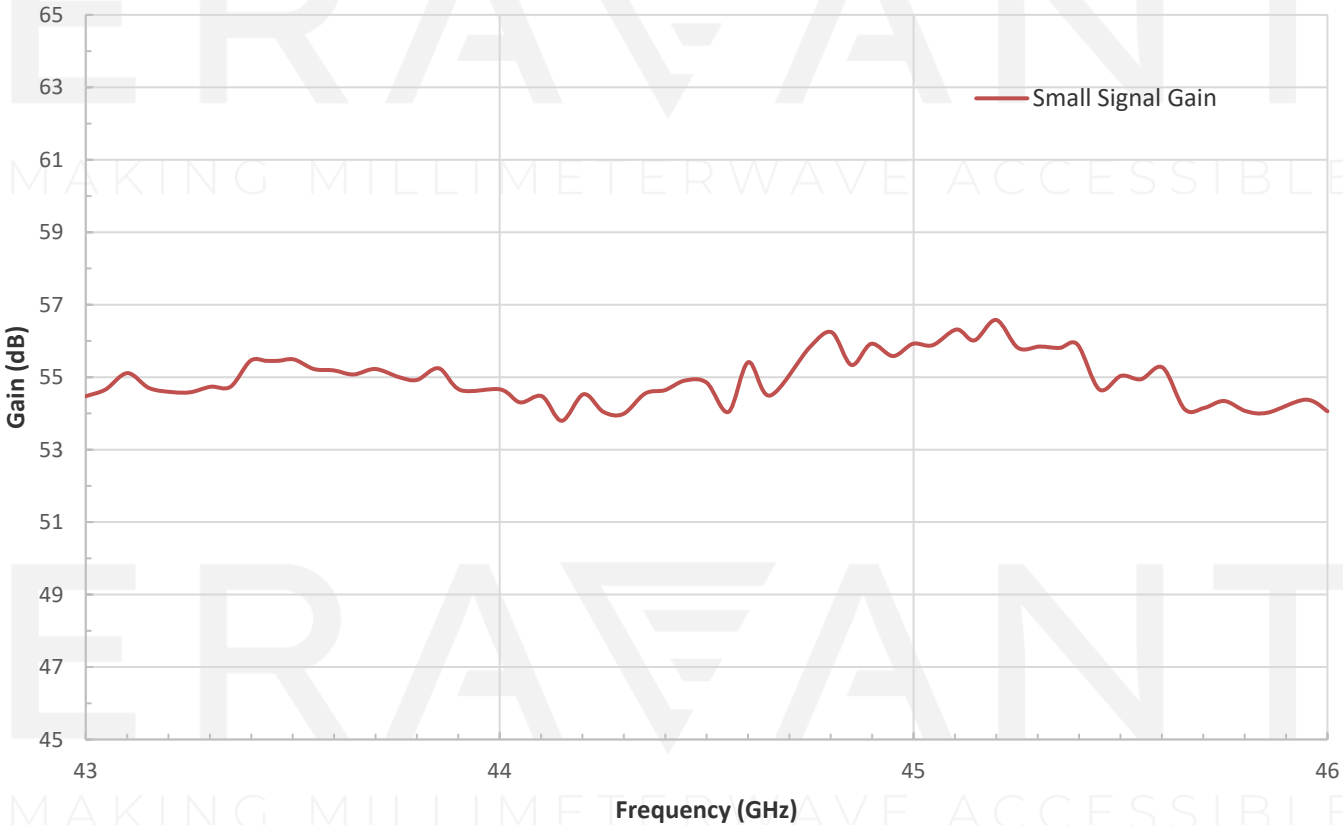
SUPPLEMENTAL DETAILS



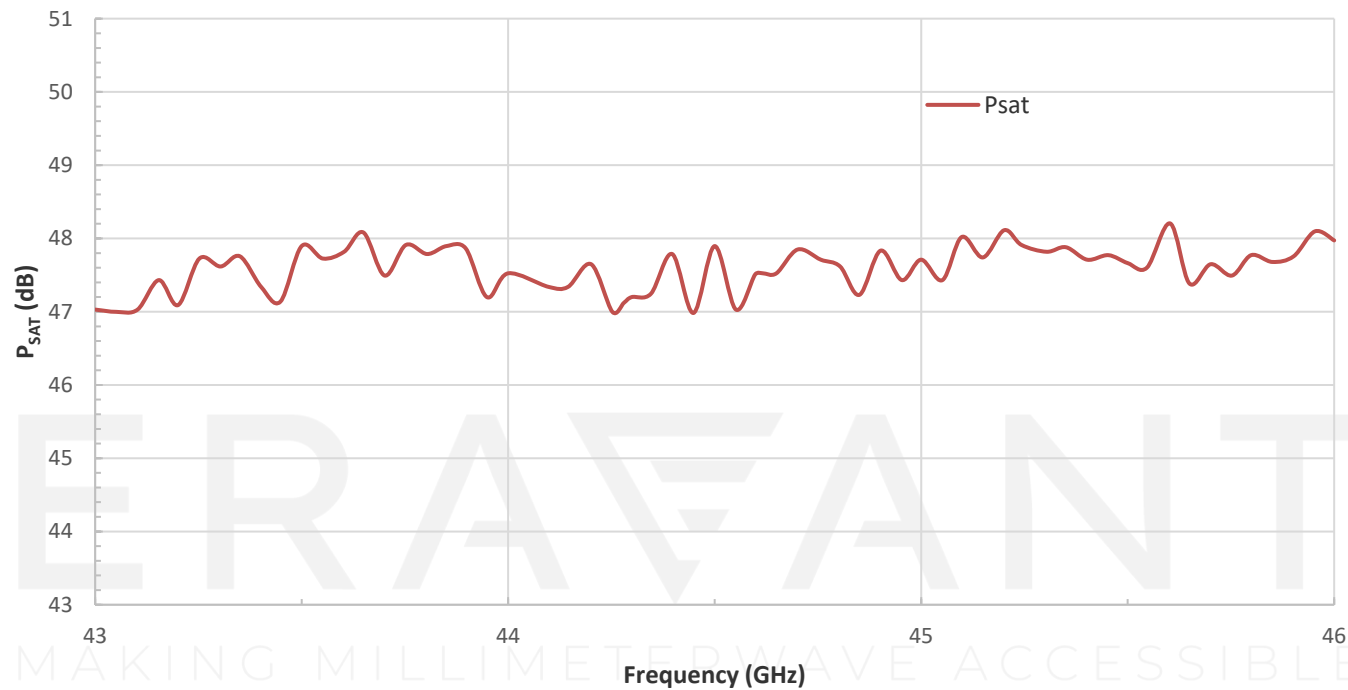
Control and Monitors:

Item	Specification
Power Enable	Turns on/off power supply to the amplifier
Input/Output Power Detector	Provides input/output power reading
High VSWR Protection	Auto shutdown if output VSWR exceeds maximum limit (3.5:1)
Overtemperature Protection	Auto shutdown if internal temperature exceeds maximum limit (85 °C)
Input Overdrive	Auto shutdown if Input power exceeds maximum limit (+10 dBm)
Over-Voltage	Auto shutdown if DC Supply Voltage exceeds maximum limit (+26 V)

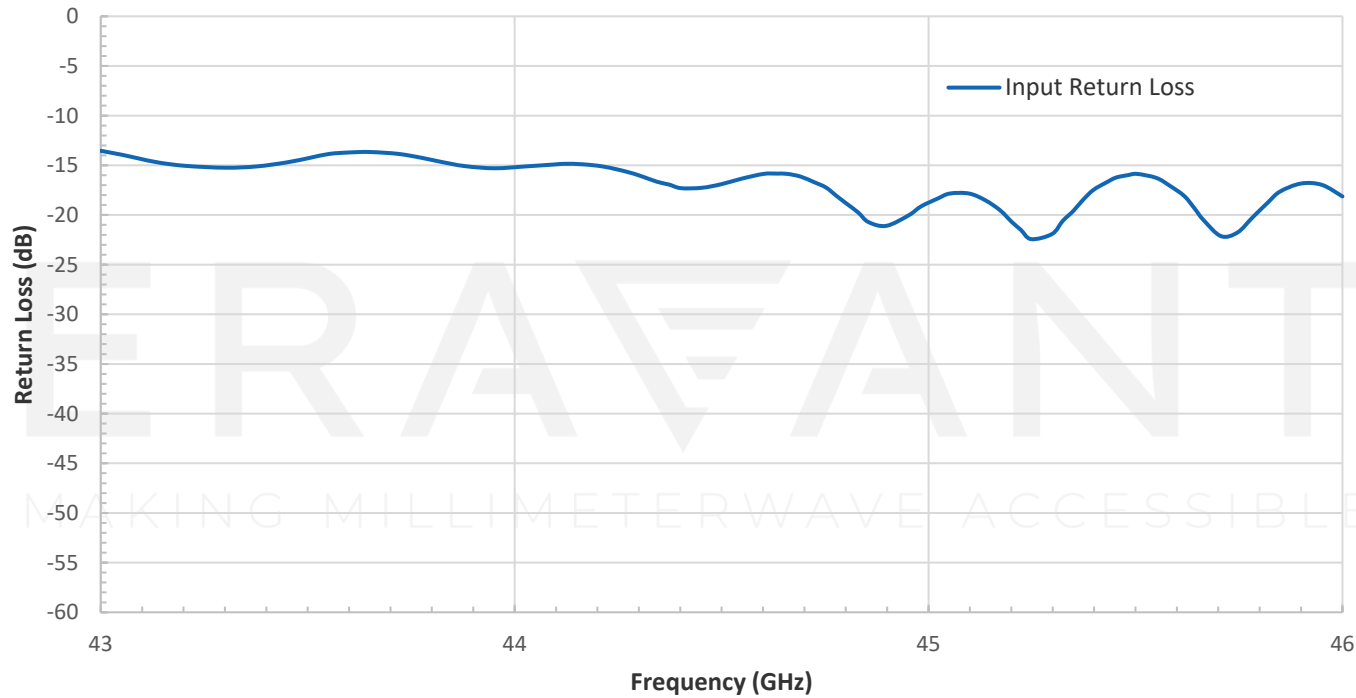
Typical Gain vs. Frequency



Typical P_{SAT} vs. Frequency

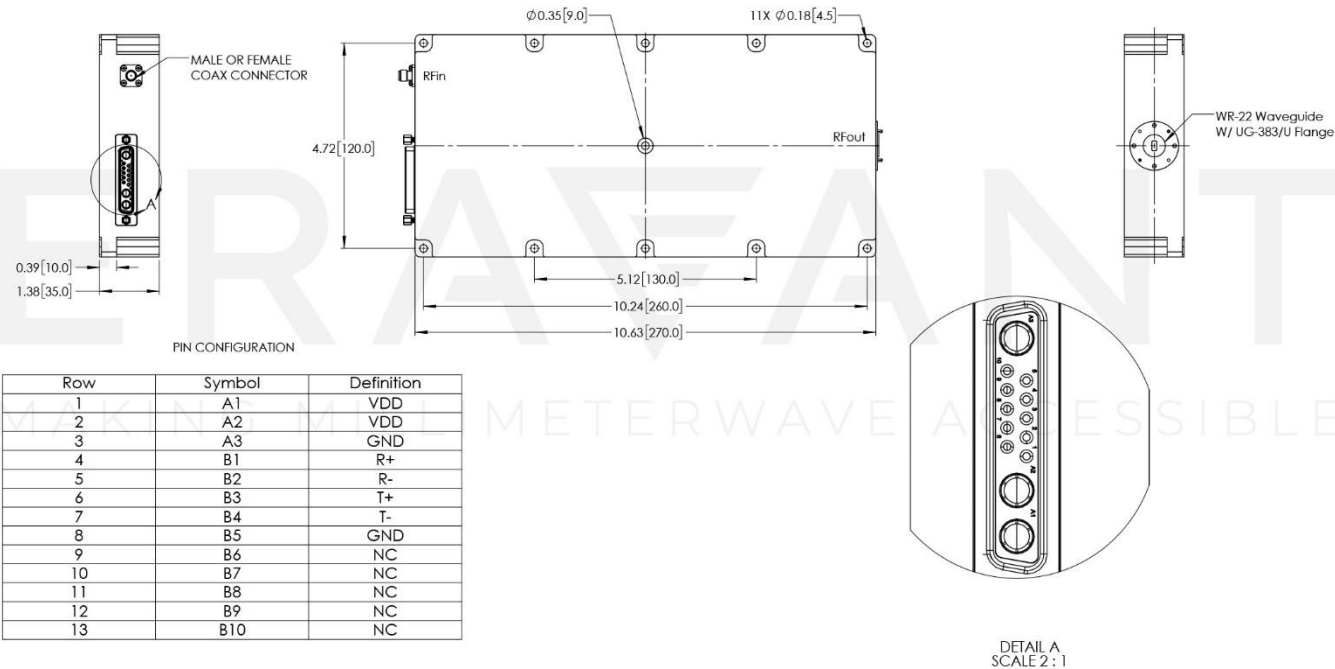


Typical Return Loss vs. Frequency



SBP-4334635447-2F22-EP

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



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.
- 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.