SBP-1141443010-0808-E1

F-Band Power Amplifier, 110 to 140 GHz, 30 dB Gain, 10 dBm P_{-1dB}

SBP-1141443010-0808-E1 is a F-band power amplifier with a typical small signal gain of 30 dB and a nominal P_{-1dB} of 10 dBm across the frequency range of 110 to 140 GHz. The DC power requirement for the amplifier is +8 V_{DC}/400 mA. The input and output port configuration offers an inline structure with WR-08 waveguides and UG-387/U-M anti-cocking flanges. Other port configurations are available under different model numbers.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	110 GHz		140 GHz
Gain		30 dB	
P_{-1dB}		+10 dBm	
P_{sat}		+13 dBm	
P_{in}			-12 dBm
Input Return Loss		6 dB	
Output Return Loss		8 dB	
DC Voltage	+6 V_{DC}	+8 V_{DC}	+15 V_{DC}
DC Supply Current		400 mA	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

Item	Specification
Input	WR-08 Waveguide with UG-387/U-M Anti-Cocking Flange
Output	WR-08 Waveguide with UG-387/U-M Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Size	1.40” (L) x 1.00” (W) x 0.75” (H)
Outline	BG-SF-2-A

ECCN

EAR99

FEATURES

- Low Power Consumption

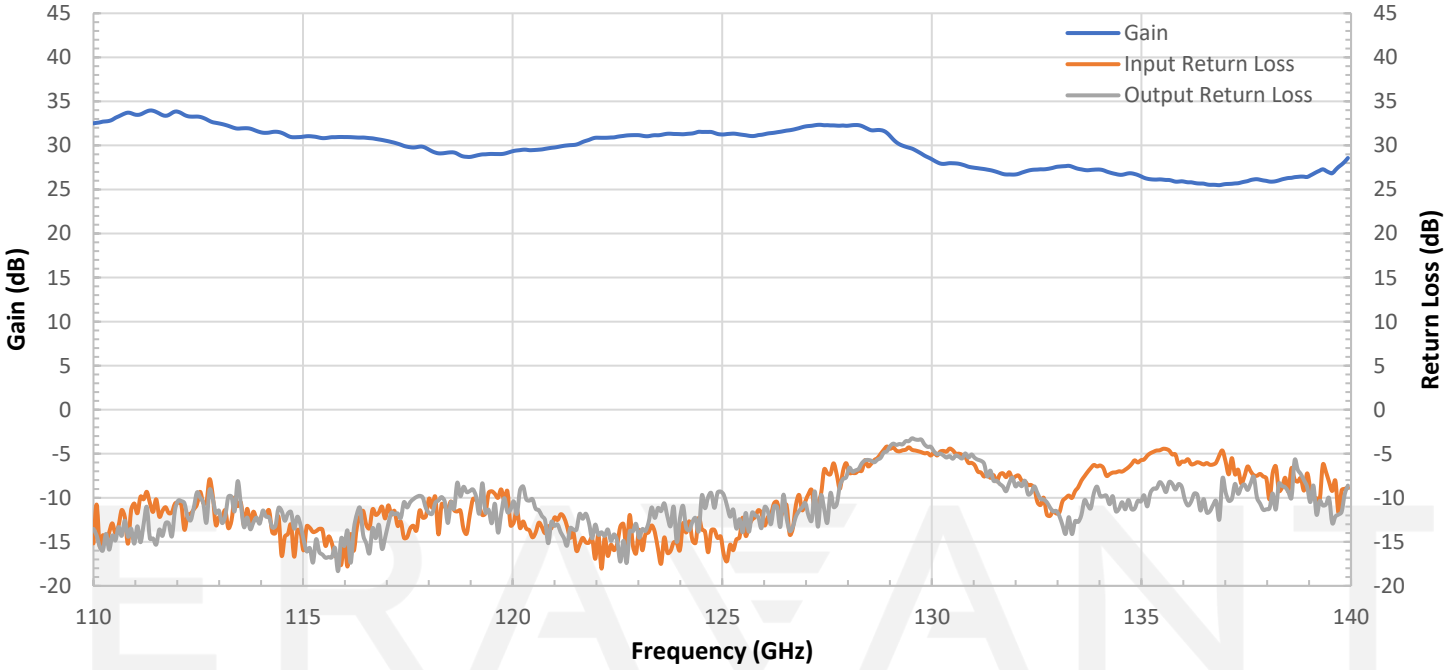
APPLICATIONS

- Passive Imaging
- Radar Systems
- Communication Systems

SUPPLEMENTAL DETAILS

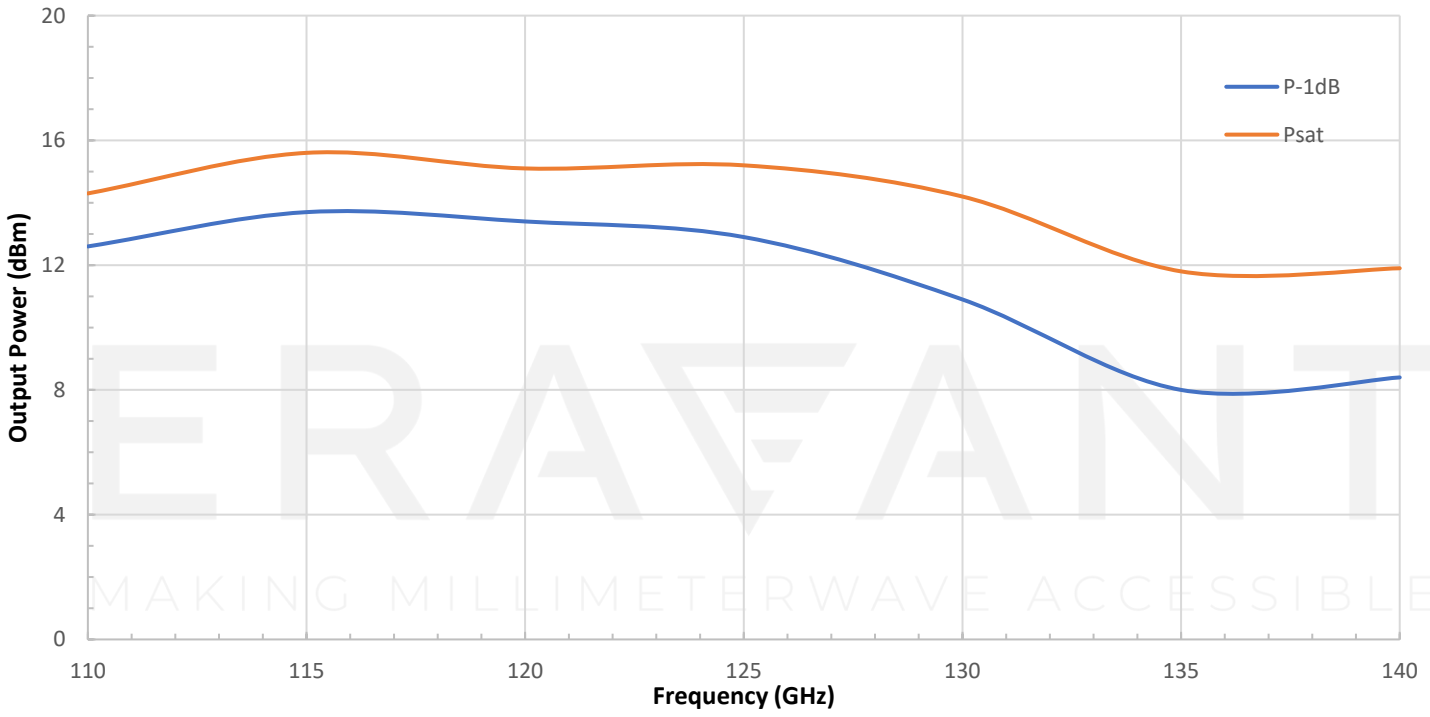
Typical Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/430 mA



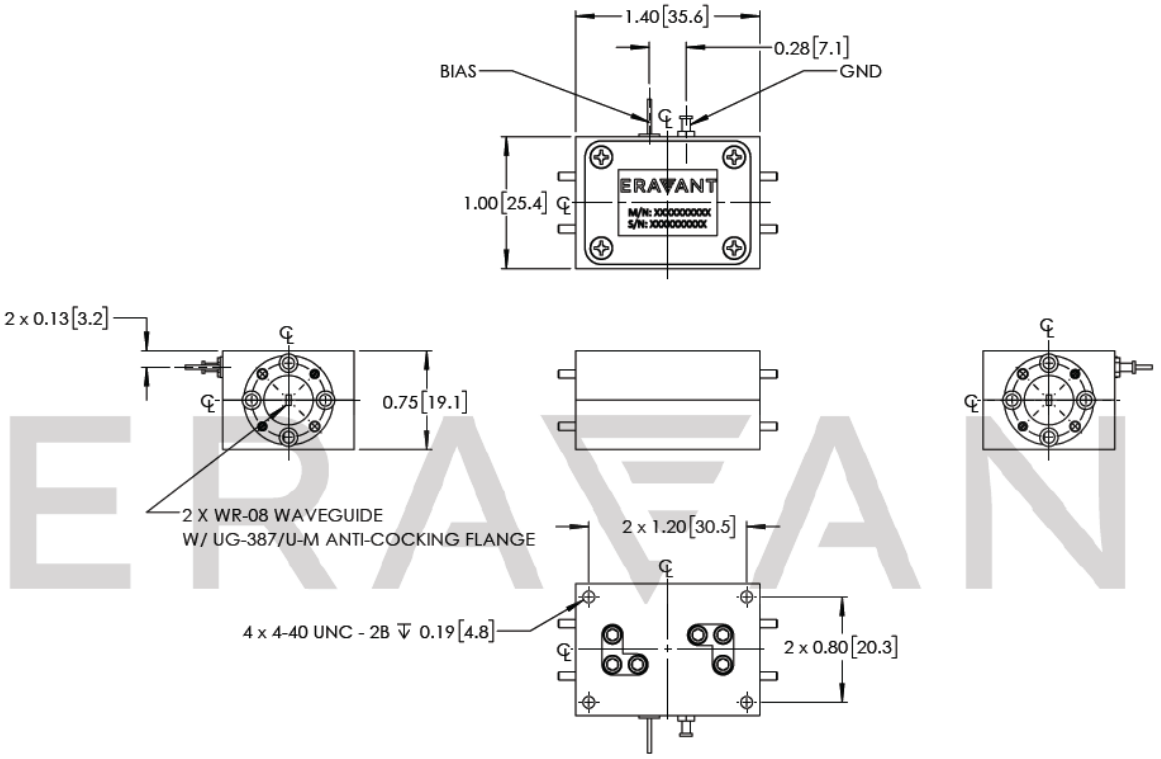
Typical Output Power vs. Frequency

Bias: +8 V_{DC}/430 mA



Mechanical Outline:

Unless otherwise specified, all dimensions are in millimeters [inches])



NOTE:

- All data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25 °C case temperature.
- 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 degrade performance and/or damage the device.