SBP-9031441006-0808-E1

F-Band Power Amplifier, 90 to 140 GHz, 10 dB Gain, 6 dBm P_{1dB}

SBP-9031441006-0808-E1 is a F-band power amplifier with a typical small signal gain of 10 dB and a typical P_{1dB} of 6 dBm across the frequency range of 90 to 140 GHz. The DC power requirement for the amplifier is +12 V_{DC}/65 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	90 GHz		140 GHz
Gain		10 dB	
P_{1dB}		+6 dBm	
P_{sat}		+10 dBm	
P_{in}			+10 dBm
Input Return Loss		8 dB	
Output Return Loss		8 dB	
DC Voltage	+10 V_{DC}	+12 V_{DC}	+15 V_{DC}
DC Supply Current		65 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
Weight	1.6 Oz
Size	1.00” (L) X 0.90” (W) X 0.75” (H)
Outline	BG-SF-3-A

ECCN

3A001.b.4

FEATURES

- High Gain and Output Power

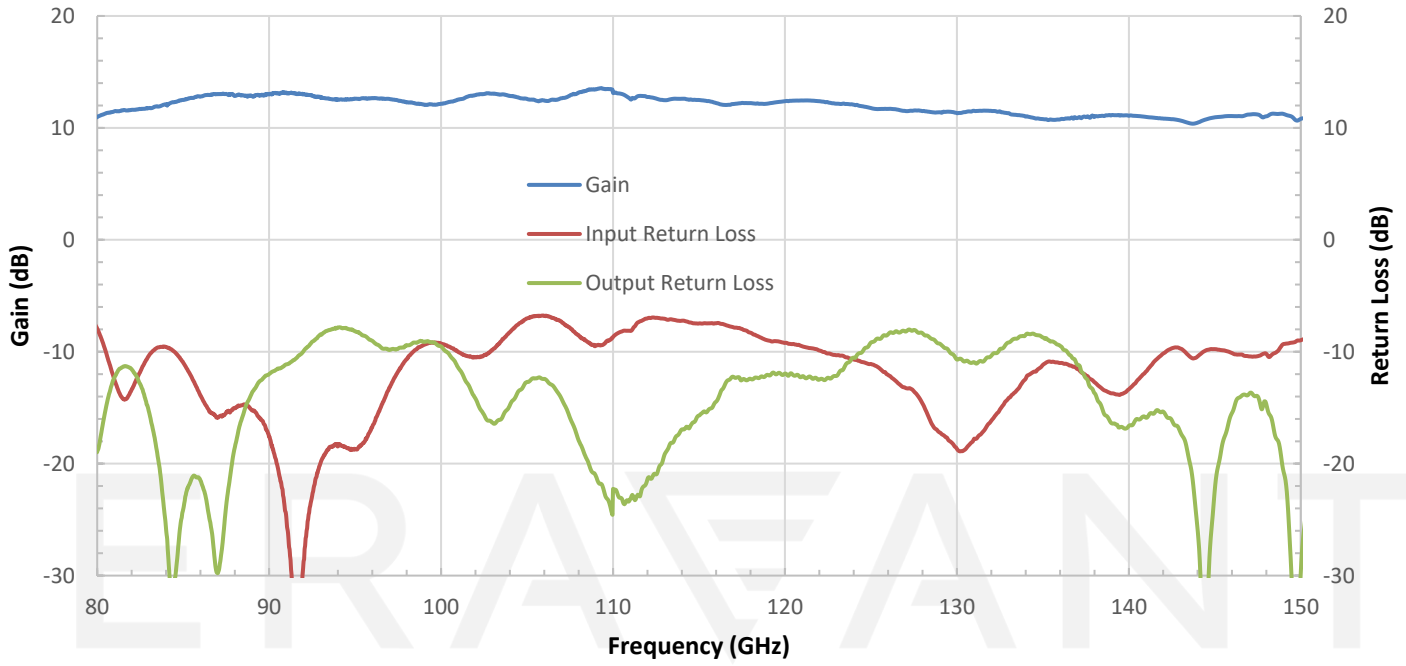
APPLICATIONS

- Test Equipment
- Communication Systems
- Radar Systems

SUPPLEMENTAL DETAILS

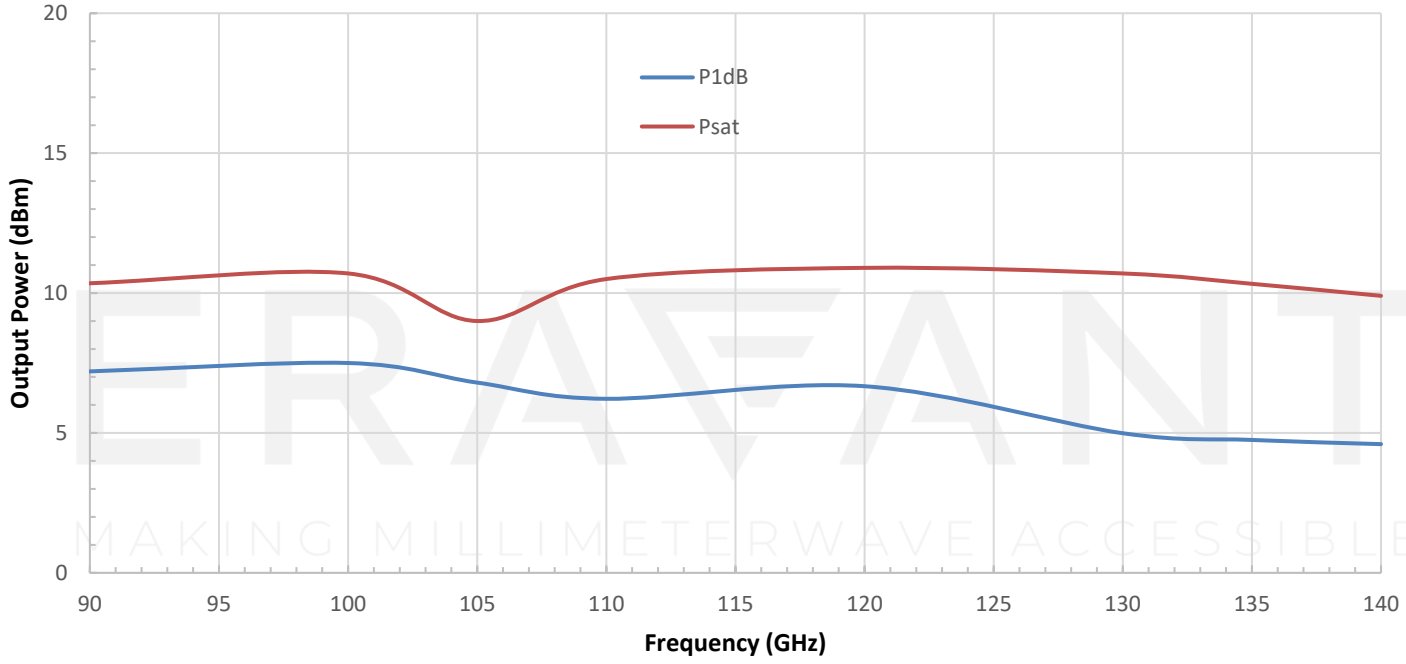
Gain and Return Loss vs. Frequency

Bias: +12 V_{DC}/65 mA

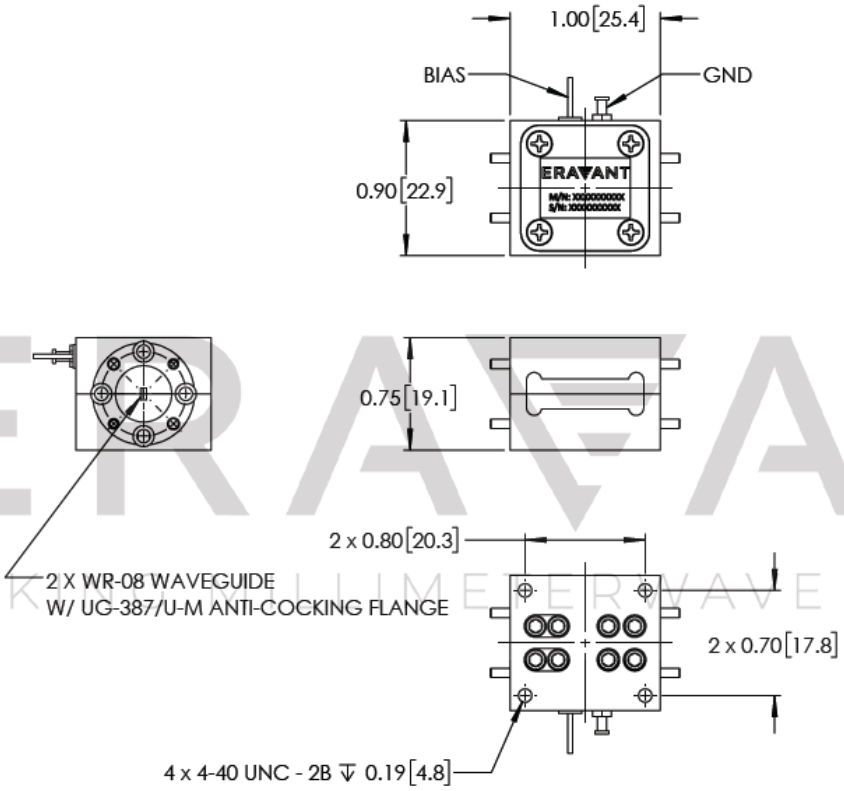


Output Power vs. Frequency

Bias: +12 V_{DC}/65 mA



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



NOTE:

- On condition that test data is provided it is collected from a sample lot. Actual data may vary slightly from unit to unit. All testing is performed under +25 °C room temperature.
- Eravant reserves the right to change the information presented without notice.

CAUTION:

- Exceeding absolute maximum ratings show 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 or destroy the unit.
- For 1 mm connectors proper torque should be applied: 4.0 ± 0.15 inch-pounds (0.45 ± 0.02 Nm). Torque wrench model SCH-06004-S1 is highly recommended.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors 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.