

**F-Band Power Amplifier, 100 to 115 GHz, 10 dB Gain, 15 dBm P<sub>1dB</sub>****Description:**

**Model SBP-1041241015-0808-E1** is a F-band power amplifier with a typical small signal gain of 10 dB and a nominal P<sub>1dB</sub> of 15 dBm across the frequency range of 100 to 115 GHz. The DC power requirement for the amplifier is +8 V<sub>DC</sub>/250 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.

**Features:**

- Moderate Output Power
- Low Power Consumption

**Applications:**

- Communication Systems
- Radar Systems

**Electrical Specifications:**

Parameter	Minimum	Typical	Maximum
Frequency	100 GHz		115 GHz
Gain		10 dB	
P <sub>1dB</sub>		+15 dBm	
P <sub>sat</sub>		+16 dBm	
P <sub>in</sub>			15 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage		+8 V <sub>DC</sub>	+12 V <sub>DC</sub>
DC Supply Current		250 mA	
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

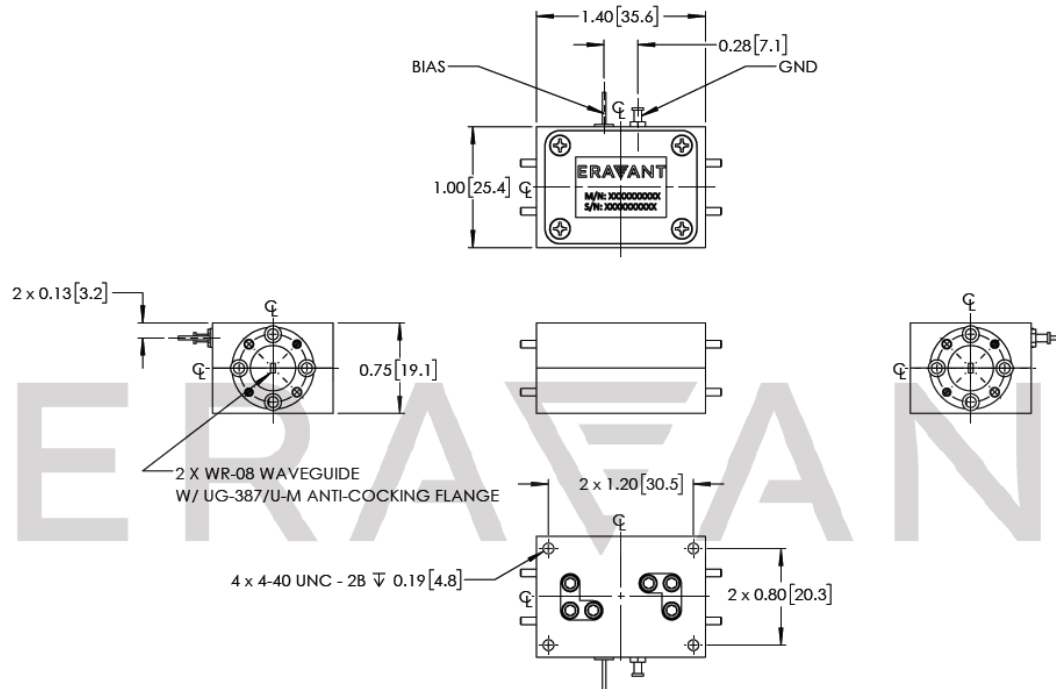
**Mechanical Specifications:**

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	1.40" (L) X 1.00" (W) X 0.75" (H)
Outline	BG-SF-2-A



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**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.
- SAGE Millimeter, Inc. 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.

