

**20 to 33 GHz Power Amplifier, 35 dB Gain, +32 dBm P<sub>1dB</sub>**

**SBP-203333532-KFKF-S1-HR-MC** is a power amplifier with a typical small signal gain of 35 dB and a nominal P<sub>1dB</sub> of +32 dBm across the frequency range of 20 to 33 GHz. The DC power requirement for the amplifier is +8 V<sub>DC</sub>/4 A. The mechanical configuration offers an inline structure with 2.92 mm connectors. Other port configurations, such as 1.85 mm connectors and WR-19 UniGuide™ waveguides for either the input or output port, are also available under different model numbers.

**Electrical Specifications:**

Parameter	Minimum	Typical	Maximum
Frequency	20 GHz		33 GHz
Gain		35 dB	
P <sub>1dB</sub>		+32 dBm	
P <sub>sat</sub>		+33 dBm	
Operational P <sub>in</sub>			+18 dBm
Absolute (Damage) P <sub>in</sub>			+20 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 (Under RF Drive)		4 A	
Supply Voltage to Fan		+12 V <sub>DC</sub>	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

**Mechanical Specifications:**

Item	Specification
Input	2.92 mm (F)
Output	2.92 mm (F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.0625 lb
Size	3.15" (L) X 3.15" (W) X 3.48" (H)
Outline	BK-SC-C1-H

**ECCN**

3A001.b.4

**FEATURES**

- High Output Power and Gain

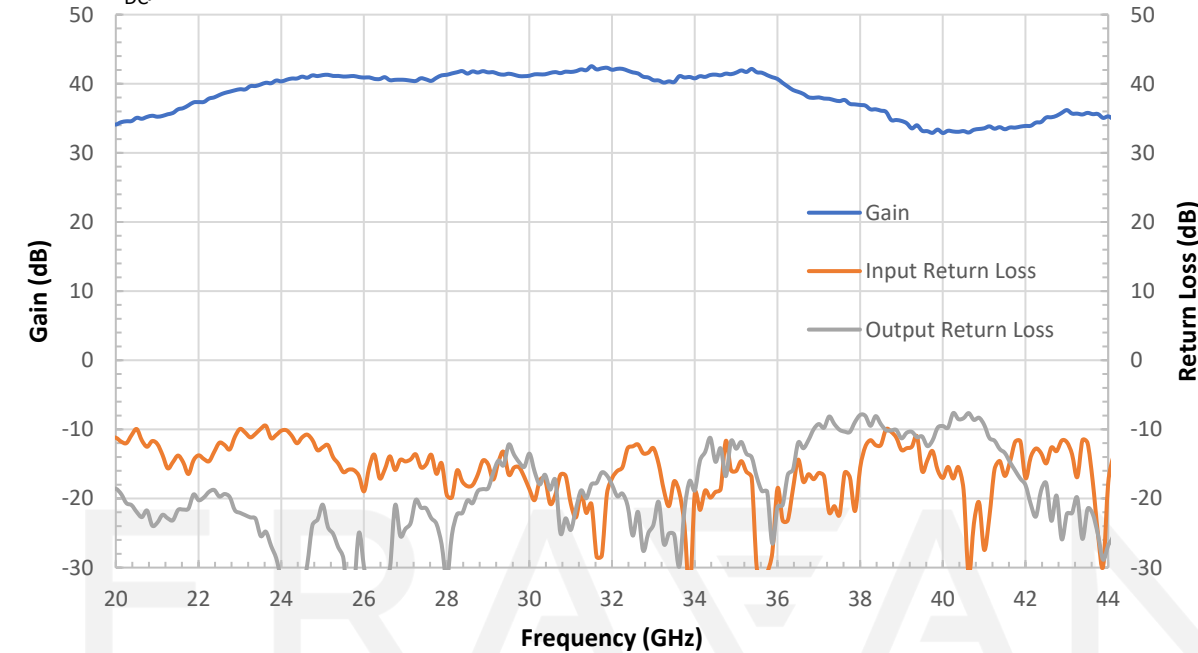
**APPLICATIONS**

- 5G System
- Starlink
- Milstar

**SUPPLEMENTAL DETAILS**

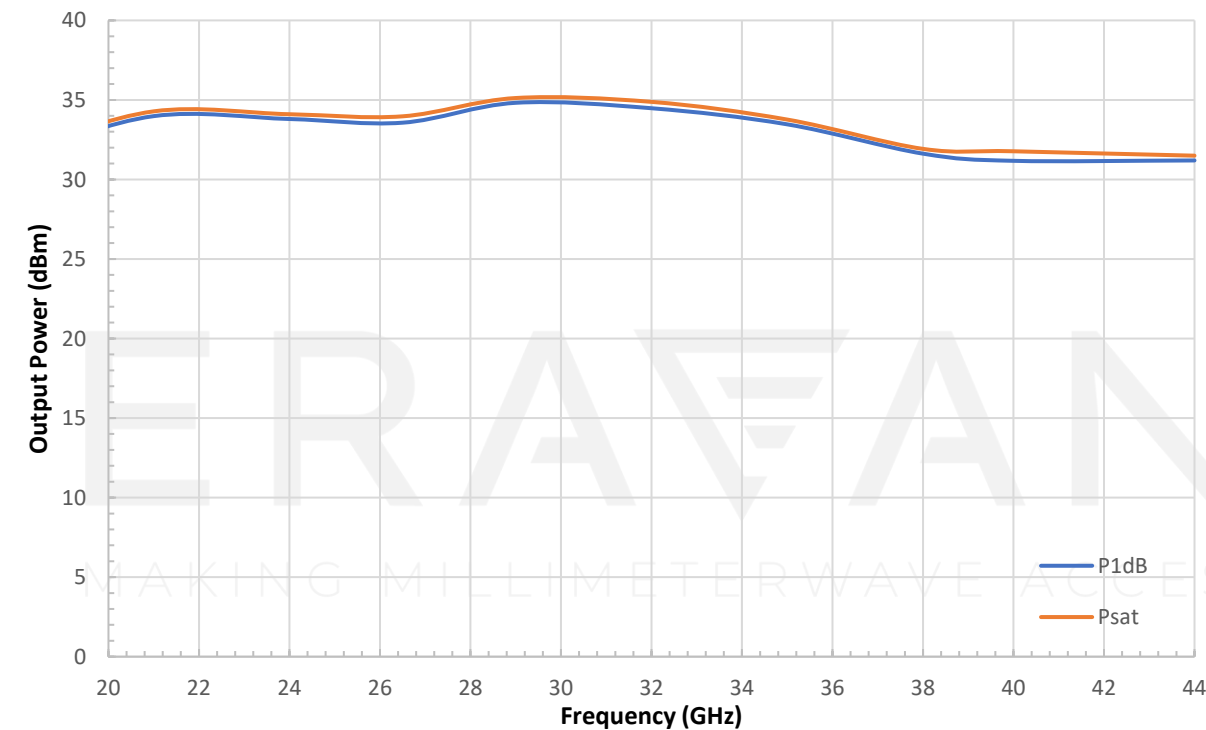
Gain and Return Loss vs. Frequency

Bias: +8 V<sub>DC</sub>/2.8 A



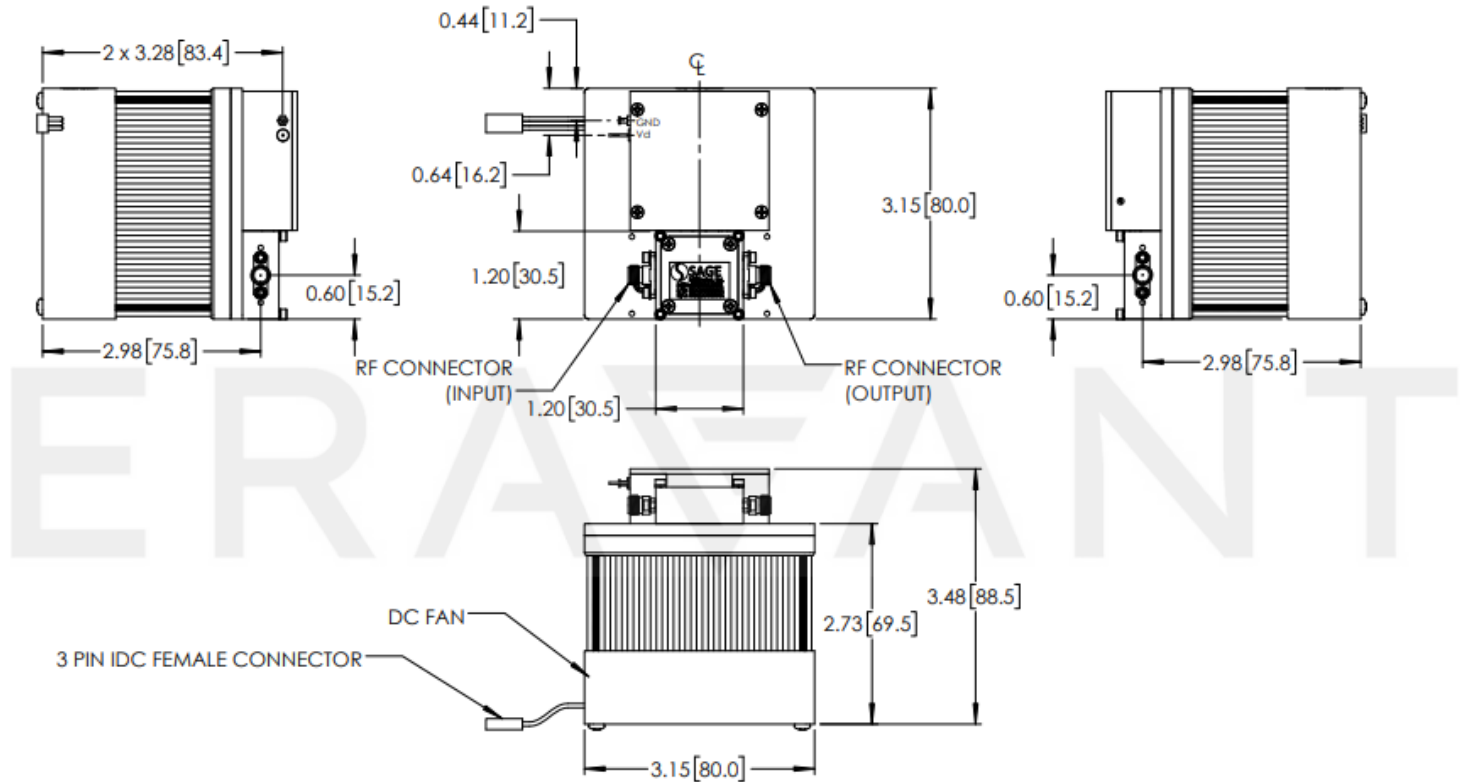
Output Power vs. Frequency

Bias: +8 V<sub>DC</sub>/4.5 A



## SBP-203333532-KFKF-S1-HR-MC

**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.
- 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 coaxial connectors will cause performance degradation and may damage the device.
- Proper torque,  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm), should be applied. **Torque wrench, model SCH-08008-S1, is highly recommended.**

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