# SBP-4735133028-VFVF-S1-HR

## Coaxial Power Amplifier, 47 to 52 GHz, 30 dB Gain, +28 dBm P<sub>1dB</sub>

### **Description:**

Model SBP-4735133028-VFVF-S1-HR is designed and manufactured for Starlink applications. This product is a power amplifier with a typical small signal gain of 30 dB and a nominal P<sub>1dB</sub> of +28 dBm in the frequency range of 47 to 52 GHz. The DC power requirement for the amplifier is  $+8 V_{DC}/3.3 A$ . The input and output ports are both female V connectors. Other port configurations, such as inline and right-angle waveguides, are also available under different model numbers.



### **Features:**

- **Broadband Performance**
- High Output Power

**Electrical Specifications:** 

High Gain

# **Applications:**



- Starlink
- **Radar Systems**
- 5G Systems

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Parameter	Minimum	Typical	Maximum
Frequency	47 GHz		52 GHz
Gain		30 dB	
P <sub>1dB</sub>		+28 dBm	
P <sub>SAT</sub>		+29 dBm	
P <sub>in</sub>			0 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage	+6 V <sub>DC</sub>	+8 V <sub>DC</sub>	+12 V <sub>DC</sub>
DC Supply Current		3.3 A	
Specification Temperature		+25 °C	
Operating Temperature	0°C		+50 °C

### **Mechanical Specifications:**

Item	Specification
Input Port	V(F)
Output Port	V(F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	17 Oz
Size	3.15" (L) X 3.15" (W) X 3.48" (H)
Outline	BK-SC-C1-H



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### Gain and Return Loss vs. Frequency

Bias: +8 V<sub>DC</sub>/3.3 A



**Output Power vs. Frequency** 

Bias: +8 V<sub>DC</sub>/3.3 A RFsat: +8Vdc/5.6 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.
- Other mechanical configurations are available under different model numbers.

#### **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 cause performance degradation and may damage the device.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.



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