SBP-2733134036-KF28-E3

Rev 1.0

Ka-Band Power Amplifier, 27 to 31 GHz, 40 dB Gain, +38 dBm Psat

Description:

Model SBP-2733134036-KF28-E3 is a power amplifier with a typical small signal gain of 40 dB and a nominal P_{sat} of +38 dBm across the frequency range of 27 to 31 GHz. The DC power requirement for the amplifier is +12 V_{DC}/3 A. The RF input is a 2.92 mm female connector and the output is a WR-28 Uni-Guide™ waveguide. Other port configurations, such as K connectors and WR-28 waveguides for either the input or output port, are also available under different model numbers.

Features:

- High Gain
- Good Gain Flatness
- High Output Power

Applications:

- 5G Systems
- Radar Systems
- Communication Systems
- Test Equipment

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	27 GHz		31 GHz
Gain		40 dB	
Gain Flatness		±2 dB	
P1dB		+36 dBm	
P_{sat}		+38 dBm	
P_{in}			0 dBm
Input Return Loss		9 dB	
Output Return Loss		9 dB	
DC Supply Voltage		+12 V_{DC}	+15 V_{DC}
DC Supply Current		3 A	
Specification Temperature		+25 ˚C	
Operating Temperature	0 ˚C		+50 ˚C

Mechanical Specifications:

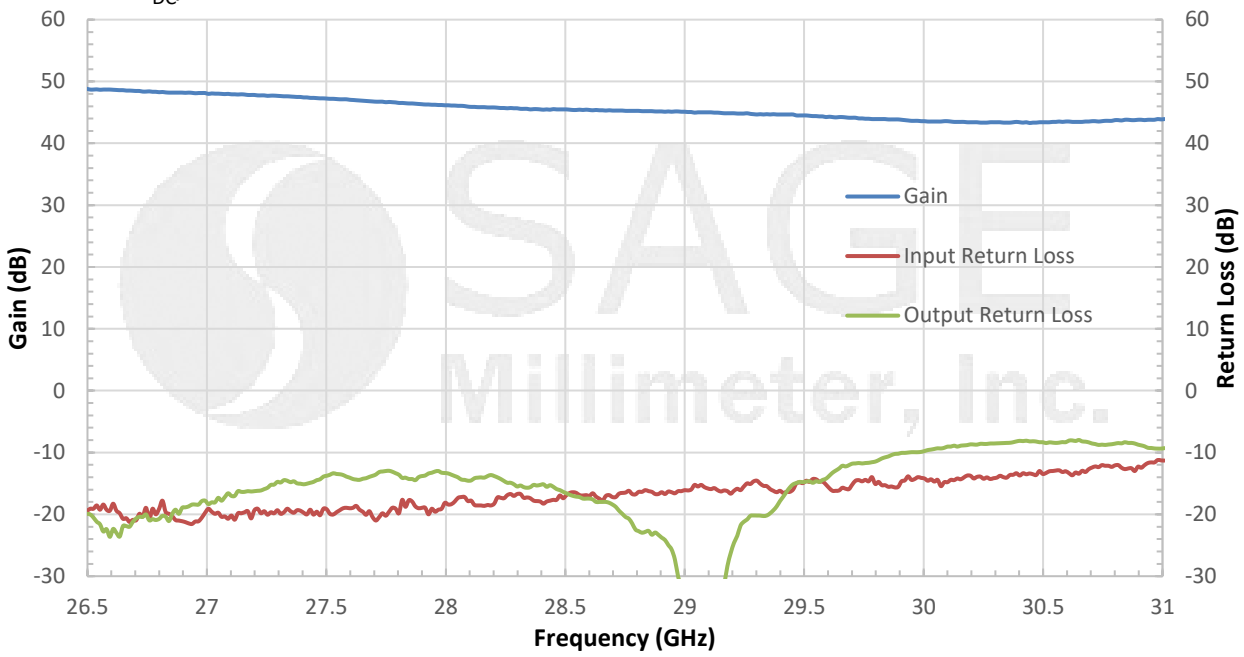
Item	Specification
Input	K(F)
Output	WR-28 Uni-Guide™ Waveguide with UG-599/U Compatible Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Size	3.35” (W) X 1.97” (L) X 0.47” (H)
Outline	BP-ZA-2CW

www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

Ka-Band Power Amplifier, 27 to 31 GHz, 40 dB Gain, +38 dBm Psat

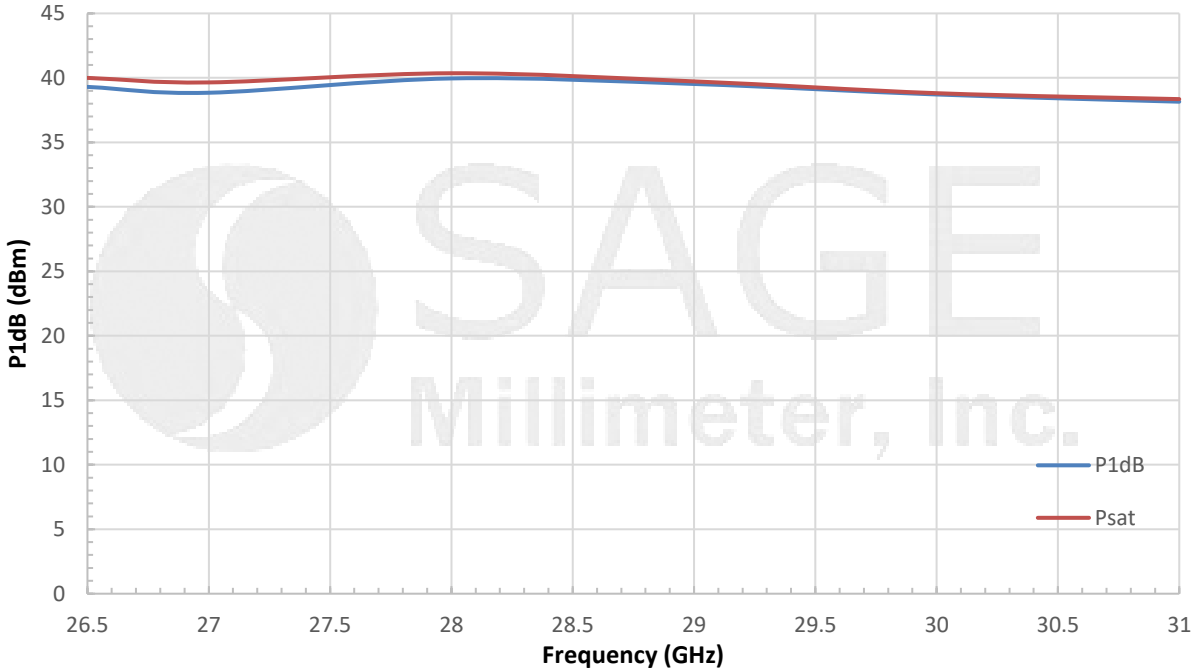
Gain and Return Loss vs. Frequency

Bias: +12 V_{DC}/3 A



P1dB vs. Frequency

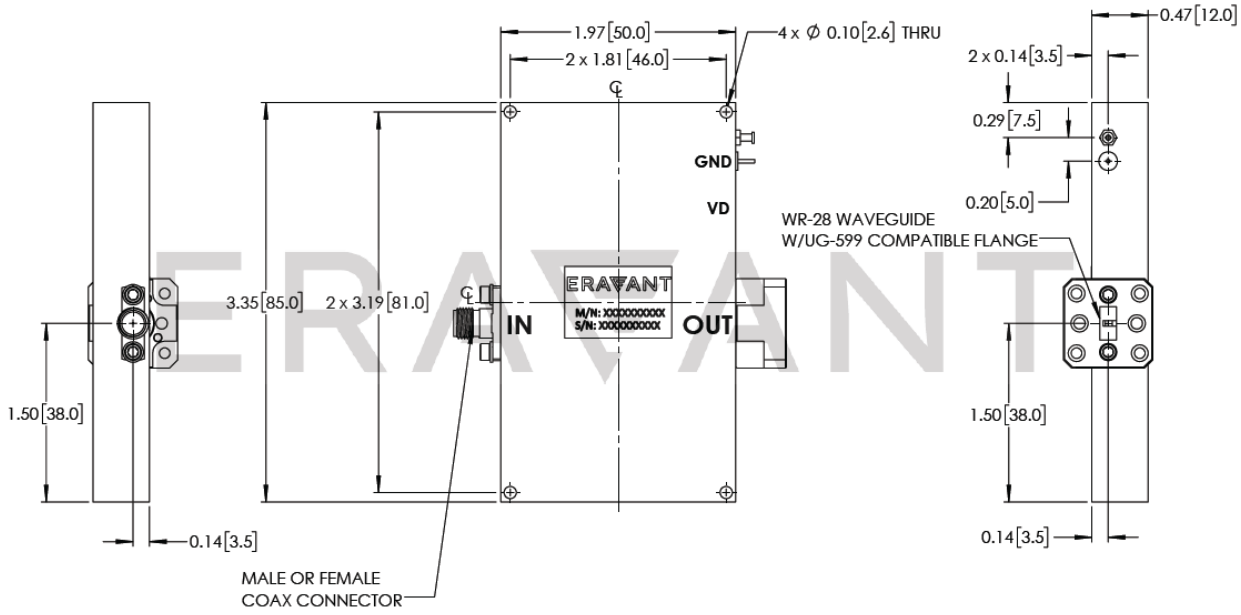
Bias: +12V_{DC}/5 A



www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505
Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

Ka-Band Power Amplifier, 27 to 31 GHz, 40 dB Gain, +38 dBm Psat

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, slightly.
- All testing was performed under +25 °C case temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.
- The amplifier employs SAGE Millimeter's trademarked and patent pending technology, **UniGuide™**, as its waveguide interfaces. The orientation of the input and the output waveguides can be specified through corresponding model numbers. For example, the model number for a horizontal output waveguide configuration would be **SBP-2733134036-KF28H-E3** instead of the default **SBP-2733134036-KF28-E3** which indicates vertical orientation output.
- 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. Eravant M/N **SUA-95-S2-4** is recommended heat-sink for this amplifier.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**