SBP-2734034526-28KF-E1

Ka-Band Power Amplifier, 26.5 to 40 GHz, 45 dB Gain, +26 dBm P_{1dB}

SBP-2734034526-28KF-E1 is a Ka band power amplifier with a typical small signal gain of 45 dB and a nominal P_{1dB} of +26 dBm across the frequency range of 26.5 to 40 GHz. The DC power requirement for the amplifier is +8 V_{DC}/1,100 mA. The mechanical configuration is an inline structure with a WR-28 Uni-Guide™ waveguide as input and K(F) connector as output. Other port configurations are available under different model numbers.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	26.5 GHz		40.0 GHz
Gain		45 dB	
P_{1dB}		+26 dBm	
P_{SAT}		+27 dBm	
Operational P_{in}			+20 dBm
Absolute (Damage) P_{in}			+22 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage		+8 V_{DC}	+12 V_{DC}
DC Supply Current		1,100 mA	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

Mechanical Specifications:

Item	Specification
Input Port	WR-28 Uni-Guide™ Waveguide with UG-599/U Compatible Flange
Output Port	2.92 mm (F)
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.6 Oz
Size	1.63” (L) X 1.20” (W) X 0.75” (H)
Outline	BG-SA-2WC

ECCN

3A001.b.4

FEATURES

- Broadband Performance
- High Gain
- High Output Power
- Good Power and Gain Flatness

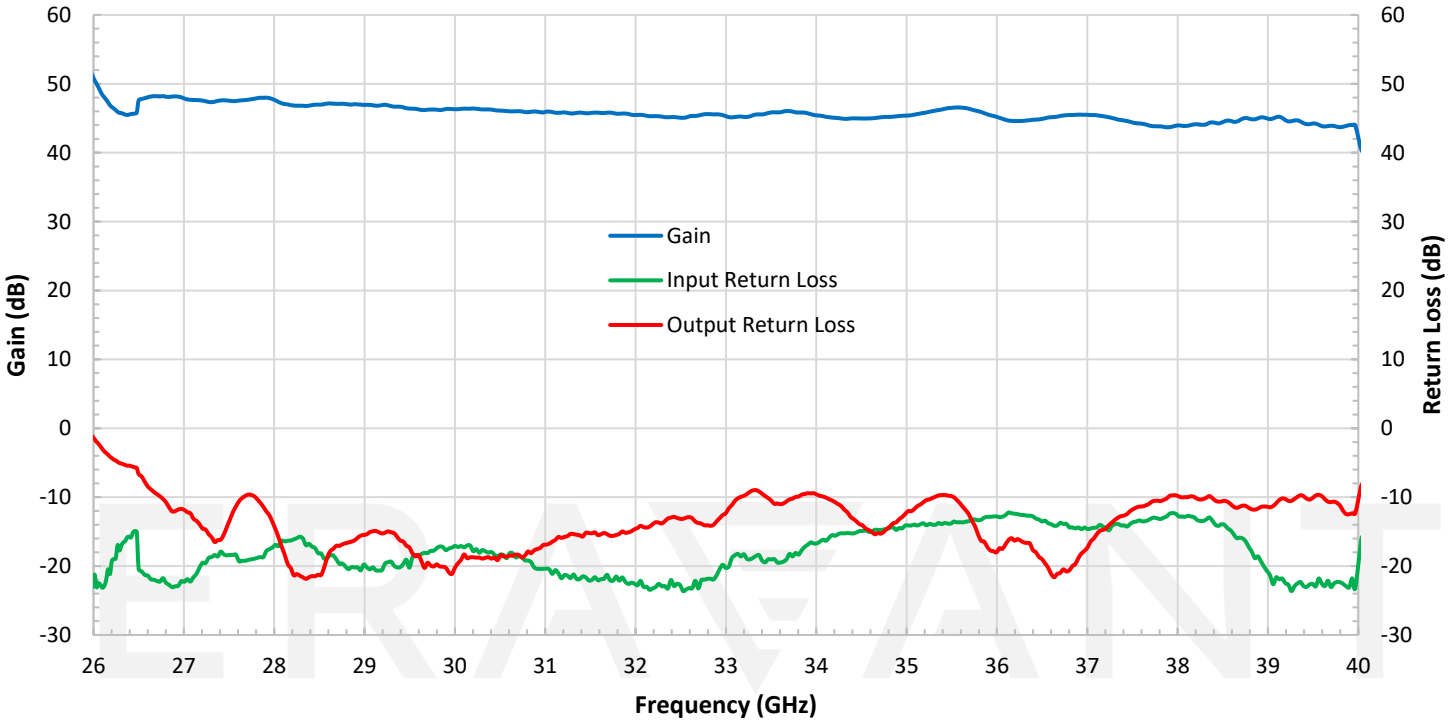
APPLICATIONS

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

SUPPLEMENTAL DETAILS

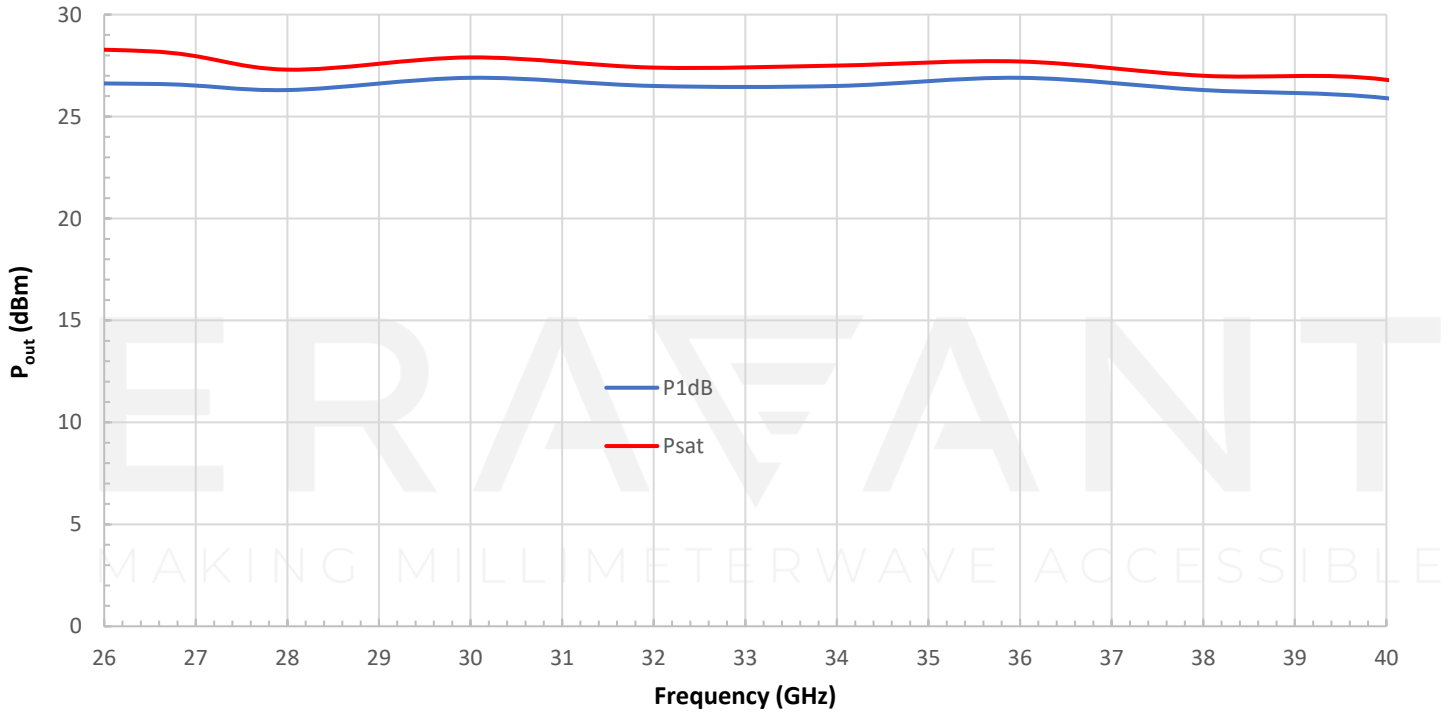
Typical Gain and Return Loss vs. Frequency

Bias: +8 V_{DC} / 1,100 mA

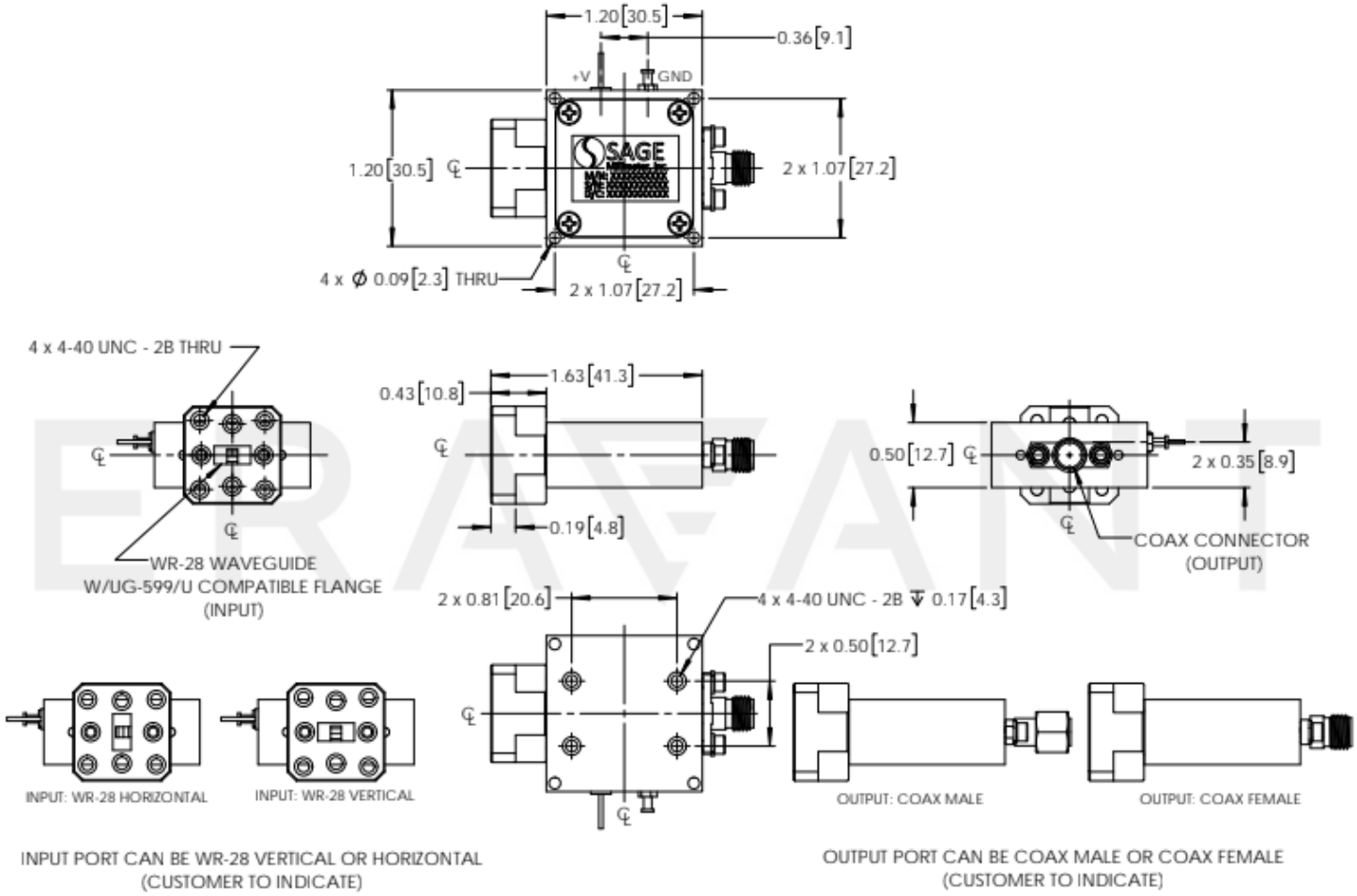


Typical Output P_{1dB} and Psat vs. Frequency

Bias: +8 V_{DC} / 1,300 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.
- The amplifier employs Eravant's trademarked and patent pending technology, **Uni-Guide™**, 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 input waveguide configuration would be **SBP-2734034526-28HKF-E1** instead of the default **SBP-2734034526-28KF-E1** which indicates vertical orientation input.
- 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.
- If a waveguide is present, any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- 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.