

SBP-3334033525-KF22-E1

Q-Band Power Amplifier, 33 to 40 GHz, 35 dB Gain, +25 dBm P_{1dB}

SBP-3334033525-KF22-E1 is a power amplifier with a minimum small signal gain of 35 dB and a nominal P_{1dB} of +25 dBm across the frequency range of 33 to 40 GHz. The DC power supply required for the amplifier is +8 V_{DC}/650 mA. The input and output port configurations are 2.92 mm (F) and WR-22 Uni-Guide™ Waveguide. Other port configurations, such as 2.4 mm connectors, inline or right angle WR-22 waveguides for either the input or output port, are also available under different model numbers.



Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency Range	33 GHz		40 GHz
Gain		35 dB	
P _{1dB}		+25 dBm	
P _{SAT}		+27 dBm	
Operational P _{in}			+18 dBm
Absolute (Damage) P _{in}			+20 dBm
Input Return Loss		10 dB	
Output Return Loss		10 dB	
DC Voltage		+8 V _{DC}	+16 V _{DC}
DC Supply Current		650 mA	
Specification Temperature		+25°C	
Operating Temperature	0°C		+50°C

Mechanical Specifications:

Item	Specification
Input Port	2.92 mm (F)
Output Port	WR-22 Uni-Guide™ Waveguide with UG-383/U Anti-Cocking Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	1.8 Oz
Size	1.58" (L) X 1.20" (W) X 1.13" (H)
Outline	FA-SQ-2CW-A

ECCN

3A001.b.4

FEATURES

- Broadband Performance
- High Output Power
- High Gain

APPLICATIONS

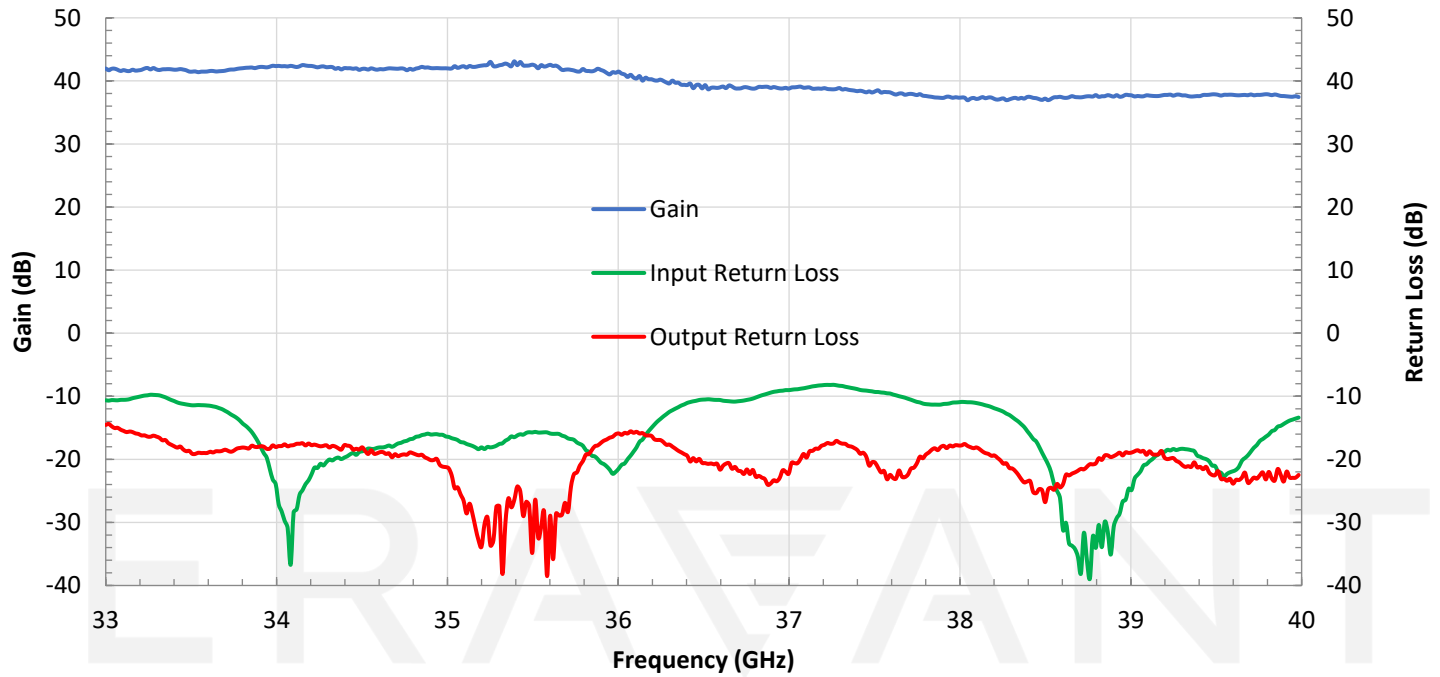
- Radar Systems
- Communication Systems
- Test Equipment

SUPPLEMENTAL DETAILS

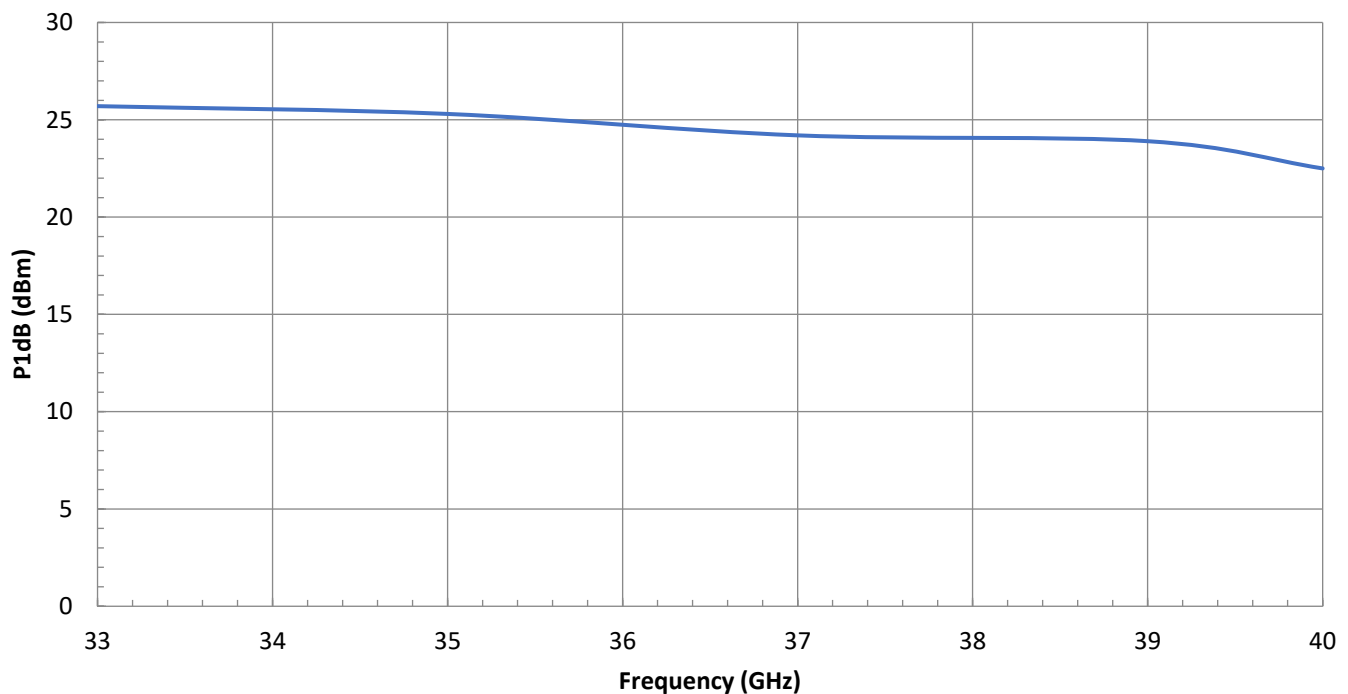
SBP-3334033525-KF22-E1

Typical Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/650 mA

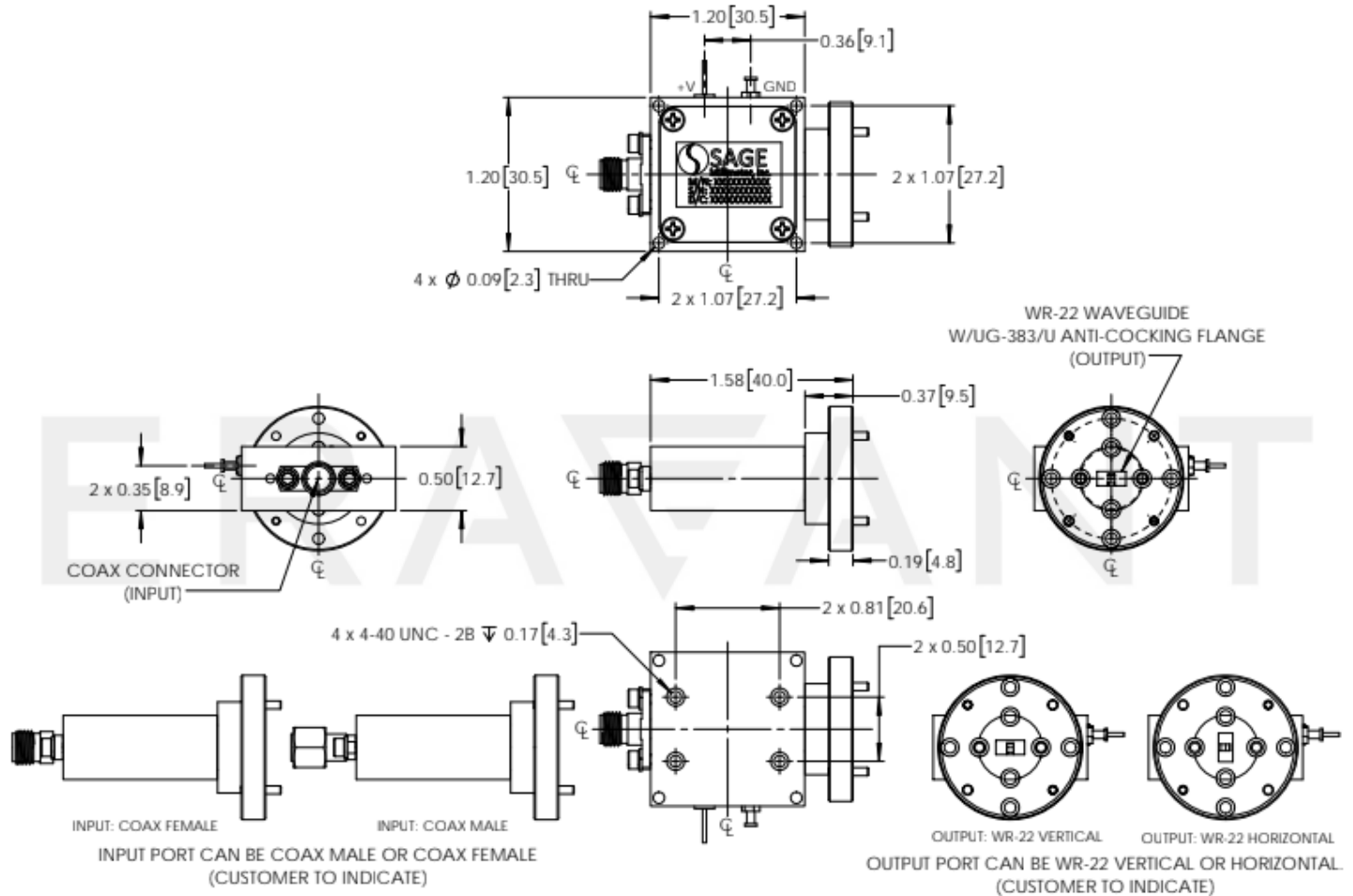


Typical P_{1dB} vs. Frequency



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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 output waveguide configuration would be **SBP-3334033525-KF22H-E1** instead of the default **SBP-3334033525-KF22-E1** which indicates vertical orientation output.
- 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 waveguide will cause performance degradation and may damage the device.
- 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.