SBL-2434233035-2828-E1

Ka-Band Low Noise Amplifier, 24 to 42 GHz, 30 dB Gain, 3.5 dB NF

SBL-2434233035-2828-E1 is a low noise amplifier with a typical small signal gain of 30 dB and a nominal noise figure of 3.5 dB across the frequency range of 24 to 42 GHz. The DC power requirement for the amplifier is +8 VDC/550 mA. The RF connectors are WR-28 Uni-Guide™ waveguides. Other port configurations, such as K connectors for either the input or output port, are also available under different model numbers.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency	24 GHz		42 GHz
Gain		30 dB	
Noise Figure		3.5 dB	
P1dB		+20 dBm	
Pin			+2 dBm
Input Return Loss		5 dB	
Output Return Loss		10 dB	
DC Voltage	+6 VDC	+8 VDC	+15 VDC
DC Supply Current		550 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	WR-28 Uni-Guide™ Waveguide with UG-599/U Compatible Flange
Bias	Solder Pin
Case Material	Aluminum
Finish	Gold Plated
Weight	2.0 Oz
Size	2.05” (L) x 1.20” (W) x 0.75” (H)
Outline	BG-SA-2

ECCN

EAR99

FEATURES

- Full Waveguide Band Coverage
- State-of-the-Art Noise Figure
- Good Gain Flatness
- High Output P1dB

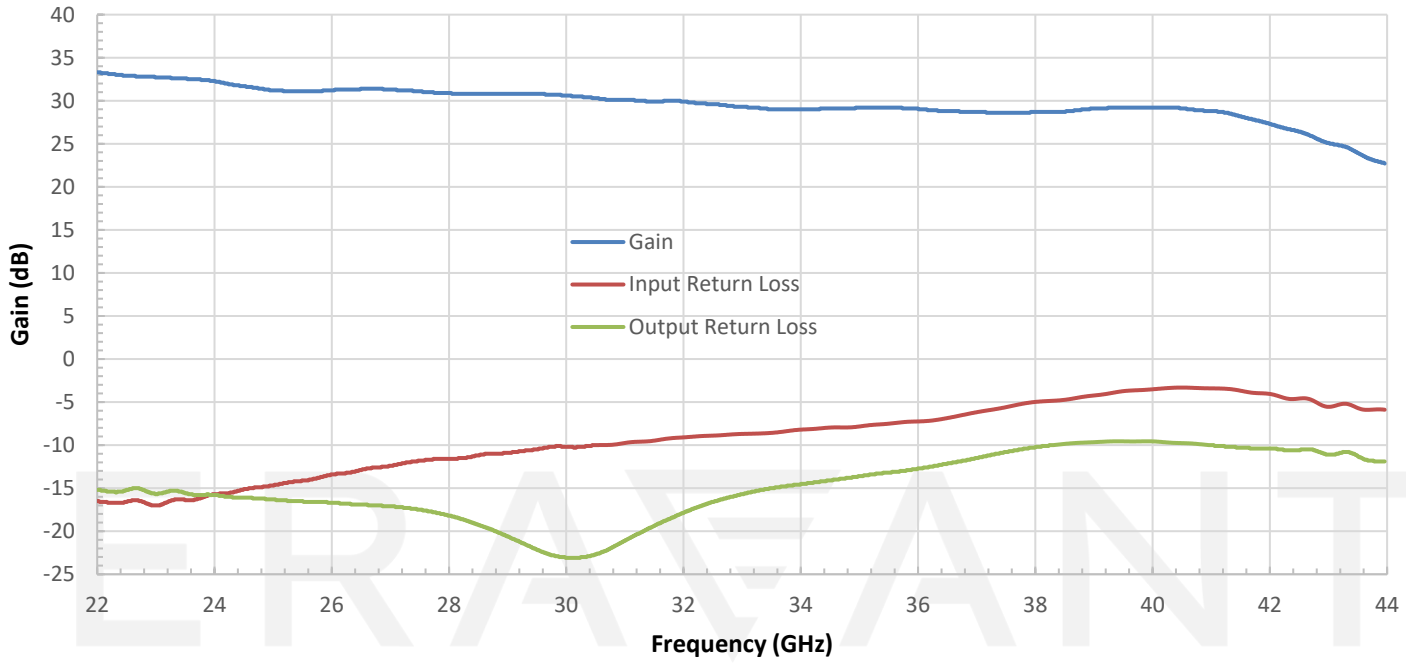
APPLICATIONS

- 5G Systems
- Radar Systems
- Communication Systems
- Low Noise Receivers

SUPPLEMENTAL DETAILS

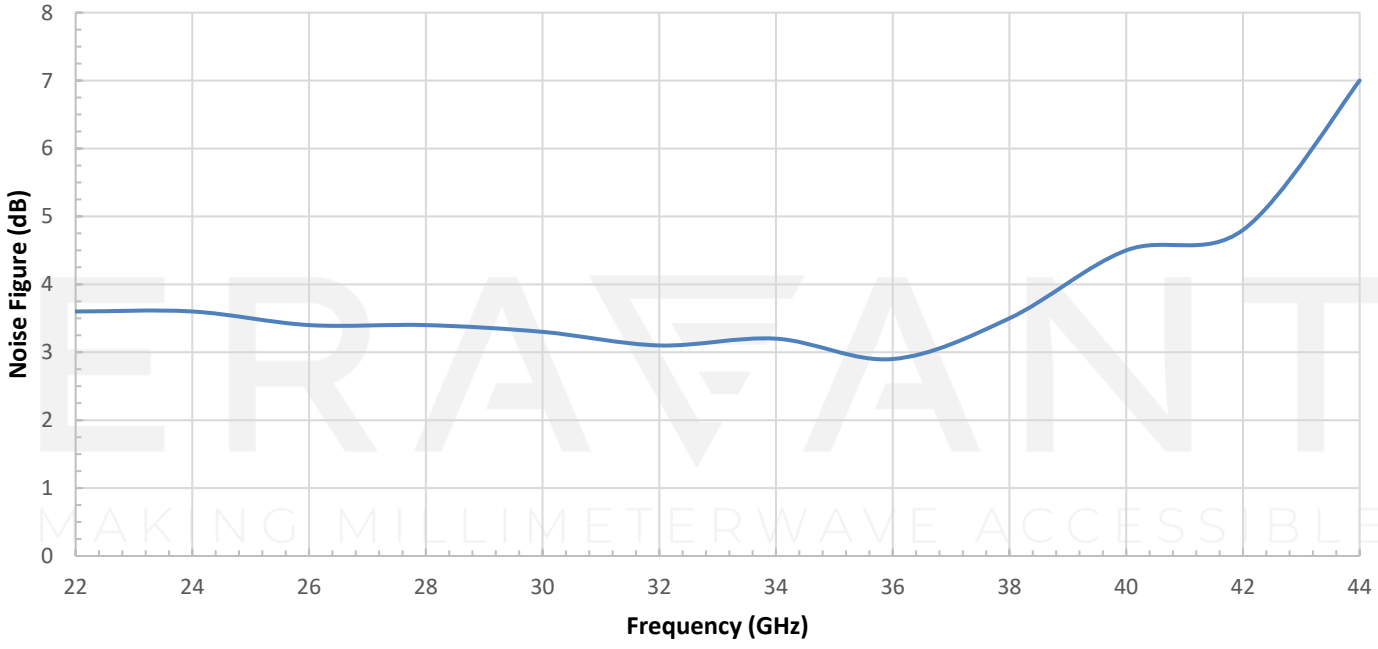
Gain and Return Loss vs. Frequency

Bias: +8 V_{DC}/568 mA



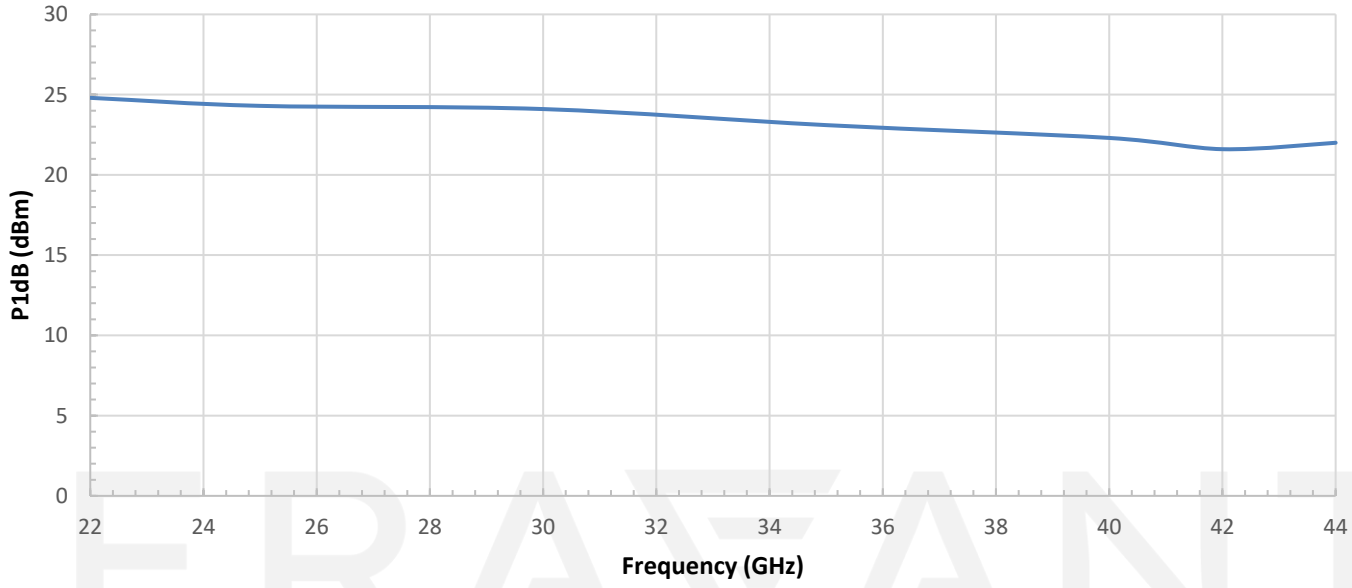
Noise Figure vs. Frequency

Bias: +8V_{DC}/568 mA

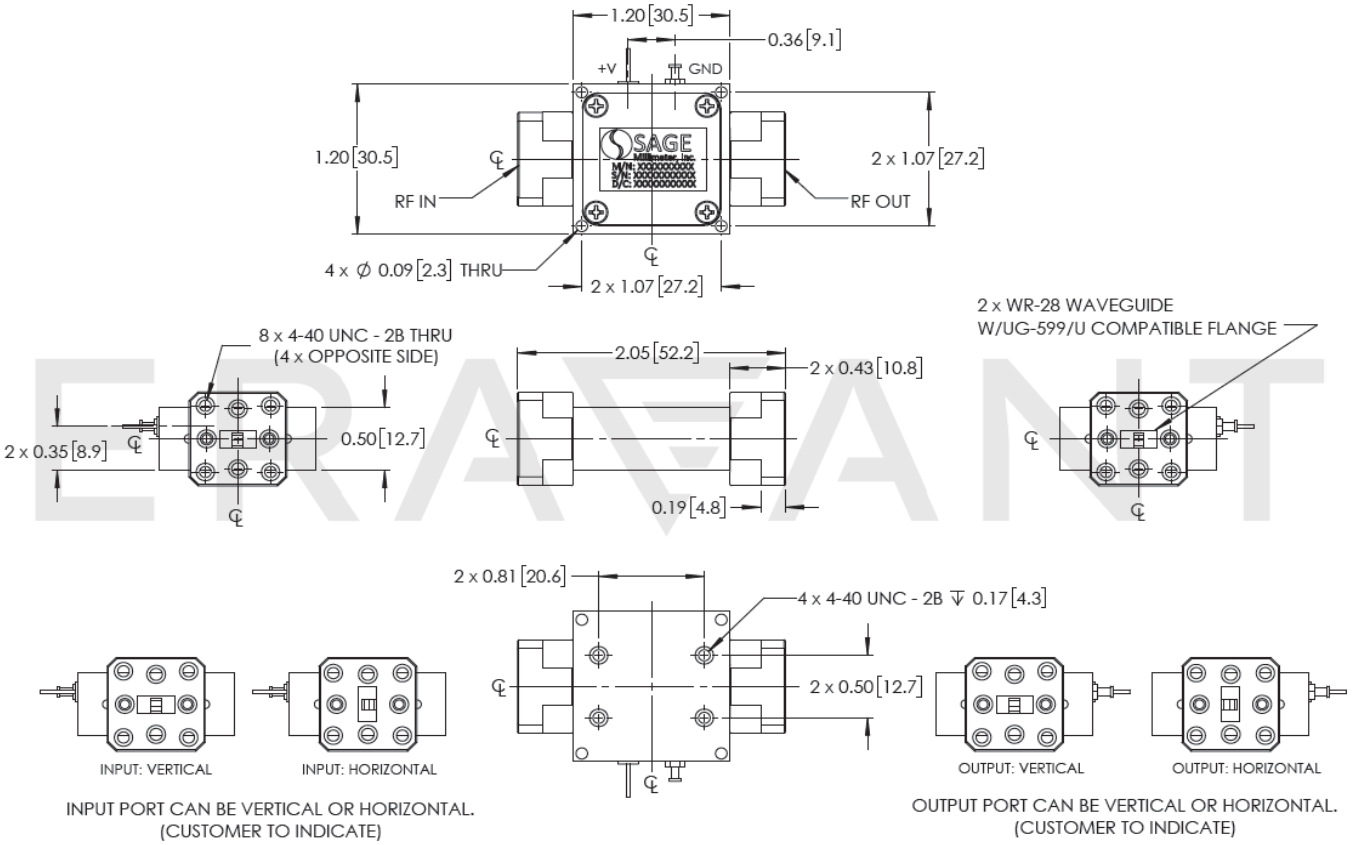


P1dB vs. Frequency

Bias: +8V_{DC}/568 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 output waveguide configuration would be **SBL-2434233035-2828H-E1** instead of the default **SBL-2434233035-2828-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.
- Exceeding the maximum bias voltage of **+15 VDC** will cause amplifier overheating and result the instability.
- 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.

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