# SBL-1442241570-0505-E1

## ERAVANT

## G-Band Low Noise Amplifier, 140 to 220 GHz, 15 dB Gain, 7 dB Noise Figure

**SBL-1442241570-0505-E1** is a G-band low noise amplifier with a typical small signal gain of 15 dB and a nominal noise figure of 7.0 dB across the frequency range of 140 to 220 GHz.  The DC power requirement for the amplifier is +8 $V_{DC}$/50 mA.  The input and output port configuration offers an inline structure with WR-05 waveguides and UG-387/U-M anti-cocking flanges.

## Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|---|---|---|---|
| Frequency | 140 GHz | | 220 GHz |
| Gain | | 15 dB | |
| Noise Figure | | 7.0 dB | |
| $P_{1dB}$ | | -5 dBm | |
| $P_{in}$ | | | -10 dBm |
| Input Return Loss | | 5 dB | |
| Output Return Loss | | 5 dB | |
| DC Voltage | +6 $V_{DC}$ | +8 $V_{DC}$ | +12 $V_{DC}$ |
| DC Supply Current | | 60 mA | 80 mA |
| Specification Temperature | | +25°C | |
| Operating Temperature | 0°C | | +50°C |

### ECCN

3A001.b.4

### FEATURES

- State-of-the-Art Noise Figure
- Low Power Consumption

### APPLICATIONS

- 6G Systems
- Low Noise Receivers

### SUPPLEMENTAL DETAILS

## Mechanical Specifications:

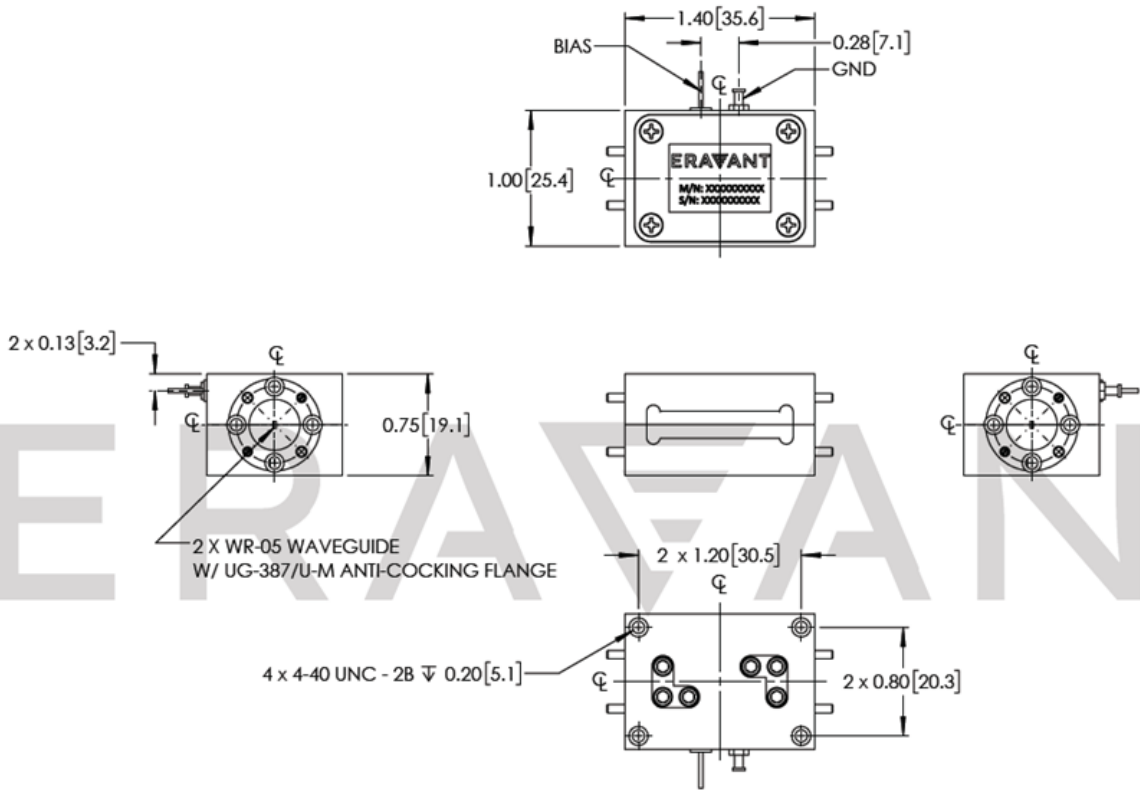| Item | Specification |
|---|---|
| RF Ports | WR-05 Waveguide with UG-387/U-M Anti-Cocking Flange |
| Bias | Solder Pin |
| Case Material | Aluminum |
| Finish | Gold Plated |
| Weight | 1.6 Oz |
| Size | 1.40" (L) X 1.00" (W) X 0.75" (H) |
| Outline | BG-SG-2-A |

## Typical Gain vs Frequency
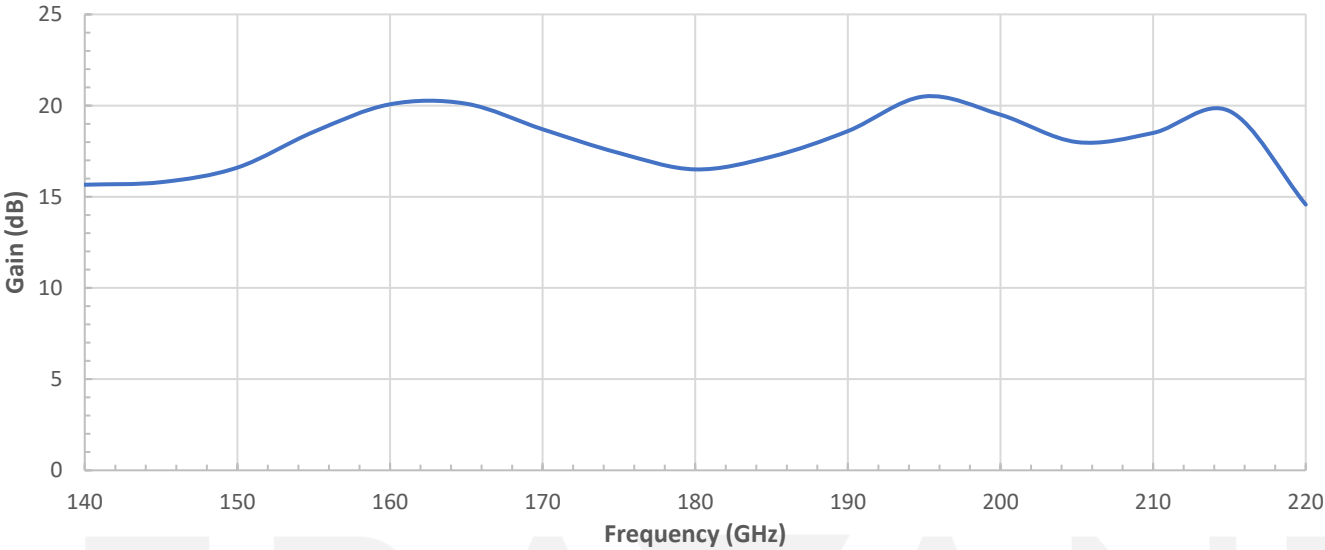


**Mechanical Outline:**
Unless otherwise specified, all dimensions are in inches [millimeters])

**NOTE:**
- The test data is provided it based on preliminary estimate. Actual data may vary after final build.
- All testing is performed under +25 °C room temperature.
- 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.
- Any foreign objects in the waveguide will cause performance degradation and may damage or destroy the unit.
- The case temperature of the device shall never exceed +50°C. Use proper heatsink or fan if necessary.