

## SBP-8138633933-1212-C1-HR

### 81 to 86 GHz, Power Amplifier, 39 dB Gain, +33 dBm P<sub>sat</sub>

**SBP-8138633933-1212-C1-HR** is a E-Band, GaAs power amplifier with a typical small signal gain of 39 dB and a nominal P<sub>sat</sub> of +33 dBm across the frequency range of 81 to 86 GHz. The DC power requirement for the amplifier is +6 V<sub>DC</sub>/ 5 A. The mechanical configuration offers an in-line structure with WR-12 waveguides and UG-387/U-M anti-cocking flanges. A heat sink is included for cooling.



### Electrical Specifications:

| Parameter                     | Minimum | Typical             | Maximum |
|-------------------------------|---------|---------------------|---------|
| Frequency Range               | 81 GHz  |                     | 86 GHz  |
| Small Signal Gain             |         | 39 dB               |         |
| P <sub>1dB</sub>              |         | +31 dBm             |         |
| P <sub>Sat</sub>              |         | +33 dBm             |         |
| Input Return Loss             |         | 10 dB               |         |
| Output Return Loss            |         | 12 dB               |         |
| DC Voltage                    |         | +6 V <sub>DC</sub>  |         |
| DC Supply Current (Quiescent) |         | 3.5 A               |         |
| DC Supply Current (Saturated) |         | 5.0 A               |         |
| Fan DC Voltage                |         | +12 V <sub>DC</sub> |         |
| Specification Temperature     |         | +25°C               |         |
| Operating Temperature         | 0°C     |                     | +50°C   |

### Mechanical Specifications:

| Item                 | Specification   |
|----------------------|---|
| Input/Output Ports   | WR-12 Rectangular Waveguide with UG-387/U-M Anti-Cocking Flange |
| Bias                 | Solder Pin  |
| Case Material        | Copper  |
| Finish               | Gold Plated, Black Anodize                                      |
| Fan Connector        | Molex 5051-03   |
| Degree of Protection | IP40  |
| Weight               | 28 oz   |
| Size                 | 3.15" (L) X 3.15" (W) X 3.73" (H)                               |
| Outline              | BP-SE-2-H95-A   |

### ECCN

3A001.b.4

### FEATURES

- Forced Air Cooling
- In-line Port Configuration
- High Power Output
- High Linearity

### APPLICATIONS

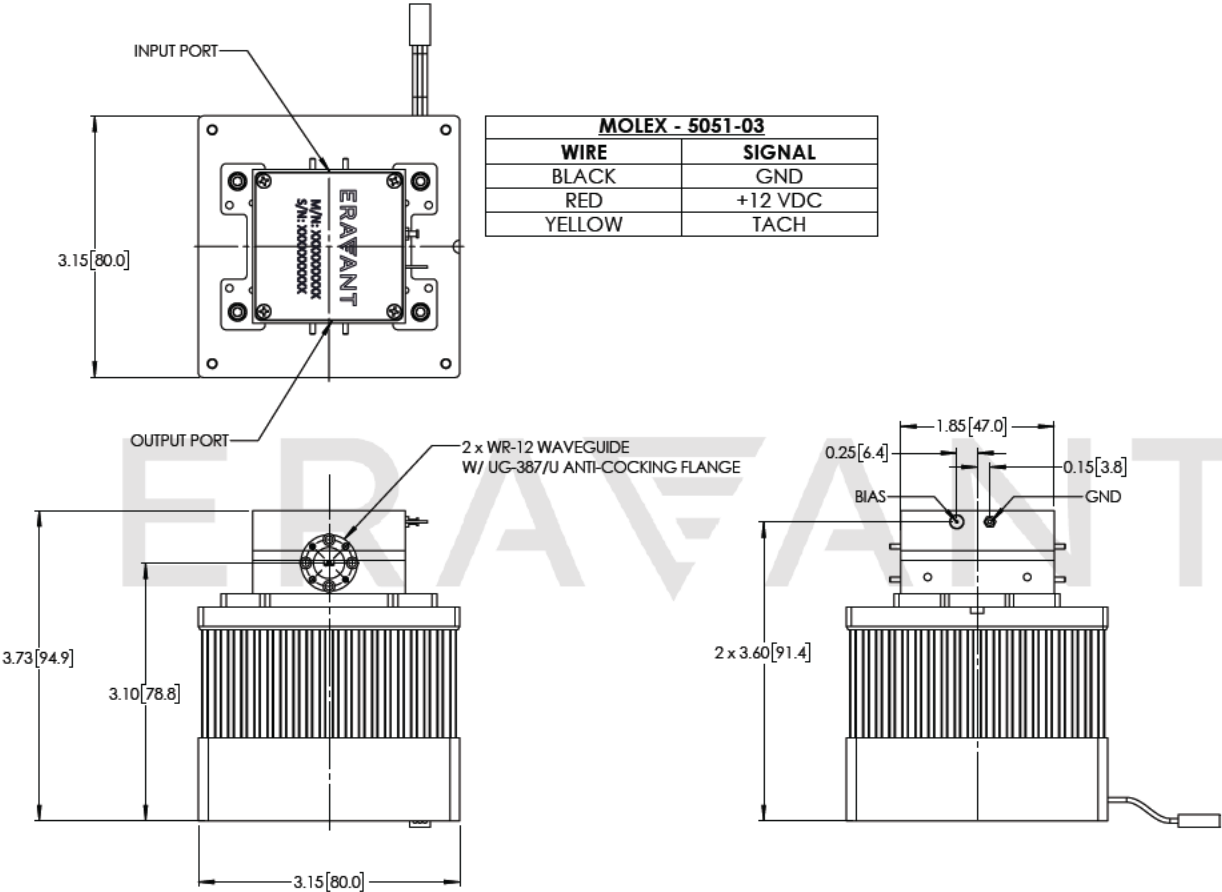
- Communications Systems
- Test Equipment
- Radar Systems

### SUPPLEMENTAL DETAILS

SBP-8138633933-1212-C1-HR

Mechanical Outline:

Unless otherwise specified, all dimensions are in inches [millimeters])



NOTE:

- The product presented in this datasheet is at a preliminary design stage. Final electrical and mechanical specifications may differ than what is presented.
- All data presented is collected from a sample lot. Actual data may vary unit to unit.
- Other mechanical configurations with other frequency bands 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 +70°C.
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.