

**Features:**

- Broad band from 9 kHz to 3GHz.
- Low noise, and high gain
- Low VSWR, unconditional stable
- SMA female connector I/O
- Single +12V DC power supply
- Operating temperature -40~+85°C, storage temperature -55~+125°C
- Weight 20.4 grams (0.72oz)

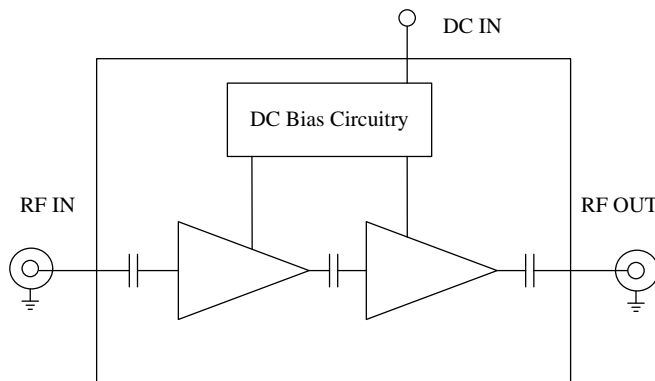
**General Description**

ABL0300-00-3230 is a two stage enhancement SiGe HBT based broadband low noise amplifier module operating in the frequency from 9 kHz to 3.0 GHz. The amplifier provides 32dB of small signal gain with 3.0dB maximum noise figure, excellent gain flatness, as well as good VSWR at both input and output. The amplifier requires only a single +12V DC power supply.

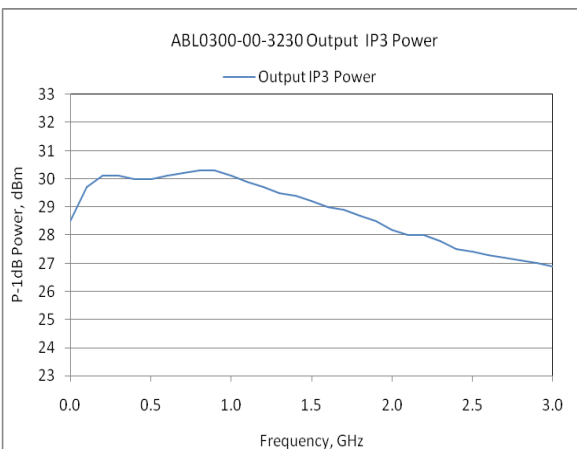
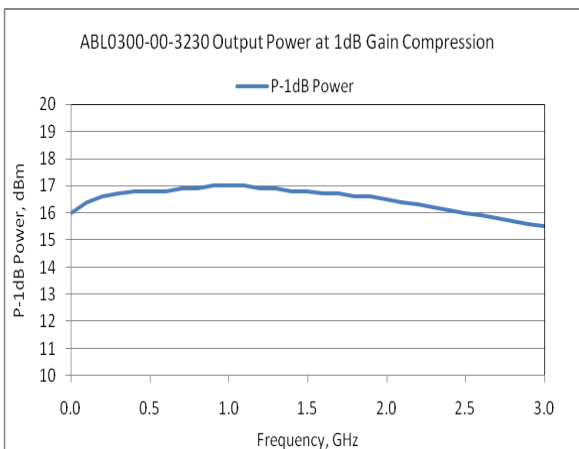
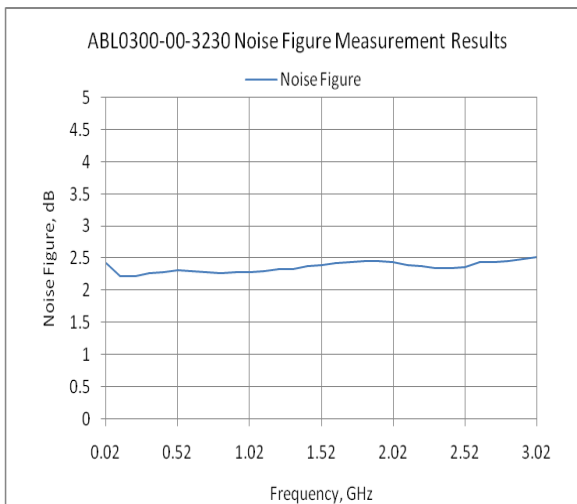
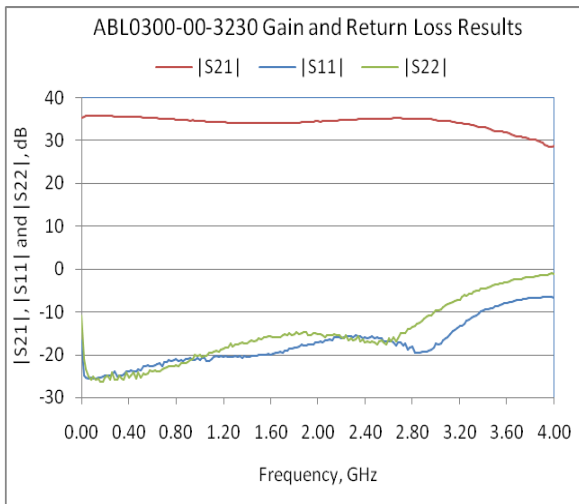
**Electrical Specifications**

| Parameters                                      | Units  | Specifications |         |         |
|---|--------|----------------|---------|---------|
|   |        | Minimum        | Typical | Maximum |
| Frequency Range                                 | MHz    | 0.009          |         | 3000.0  |
| Noise Figure at room temp over 10MHz to 3.0GHz. | dB     |                | 2.5     | 3.0     |
| P-1dB Compression Point                         | dBm    | +15.0          | +16.0   |         |
| Output IP3                                      | dBm    | +22.0          | +25.0   |         |
| Nominal SS Gain @25°C                           | dB     | 30.0           | 32.0    | 36.0    |
| Gain flatness                                   | dB     |                | +/-1.25 | +/-1.5  |
| Gain Variation                                  | dB     |                | +/-1.0  |         |
| Input VSWR                                      | -      |                | 1.6:1   | 2.0:1   |
| Output VSWR                                     | -      |                | 1.8:1   | 2.5:1   |
| Reverse Isolation                               | dB     | 45.0           | 55.0    |         |
| Spurious  | dBc    |                |         | -70.0   |
| Operating Temperature                           | °C     | -40            |         | +85     |
| Survival Temperature                            | °C     | -55            |         | +125    |
| DC Voltage                                      | °C     |                | +12.0   |         |
| DC Supply Current                               | mA     | 90.0           | 110.0   | 130 mA  |
| In/Out connectors                               | -      | SMA female     |         |         |
| Size  | inches | 1.5×0.85×0.375 |         |         |

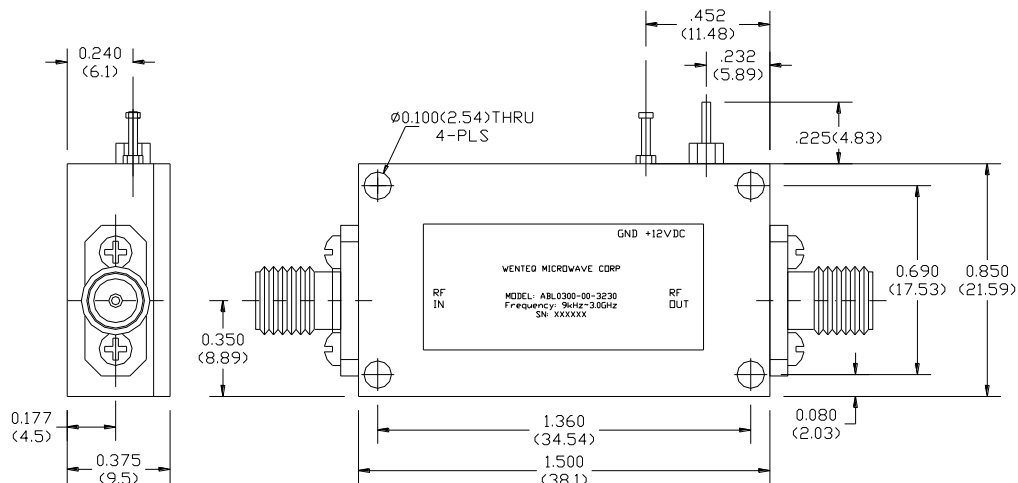
Functional Diagram



Typical Test Results:



**Mechanical Structure:**



Note: All units in inches(mm).

**Housing Material and Surface Finish:**

- Body and cover material: aluminum
- Surface finish: nickel plated
- Connector material: Copper
- Connector surface finish: gold plated

**Absolute Maximum Ratings**

|                       |            |
|-----------------------|------------|
| DC Voltage            | +15.0V     |
| RF Input Power        | +5.0dBm    |
| Storage Temperature   | -55~+125°C |
| Operating Temperature | -40~+85°C  |

**Revision History:**

| Revision | Date       | Description               | Comments |
|----------|------------|---------------------------|----------|
| A00      | 02/18/2008 | Initial Release           |          |
| A01      | 02/20/2015 | Added picture, test plots |          |
|          |            |                           |          |



**Caution!** Electrostatic sensitive device, please observe precautions for handling ESD sensitive devices.