# WLA1216B

## 1.2 – 1.6 GHz, Super Low Noise Amplifier

**August 2016, REV A**

### Key Features

- 1.2~ 1.6 GHz, 50 Ohm impedance
- 0.5 dB noise figure
- 32 dB gain
- 1.25:1 VSWR
- 10 dBm $P_{1dB}$
- Precision machined housing
- RoHS compliant

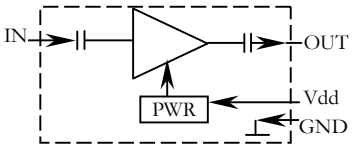
### Applications

- GPS
- Receiver amplifiers
- RF bench tests
- Mobile base station applications
- DCS
- Fixed wireless


### Absolute Maximum Ratings

| | |
|---|---|
| Input CW RF Power | 10 dBm |
| DC Voltage, $V_{dd}$ | -0.5, +32V |
| Operating Temperature | -40°C to +85°C |
| Storage Temperature | -40°C to +85°C |

### Functional Block Diagram




### Ordering Information

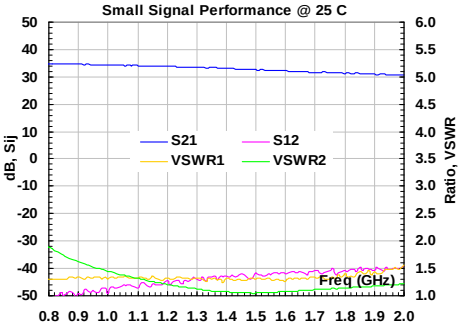
| Model | Connectors |
|---|---|
| **WLA1216B** | SMA Female |

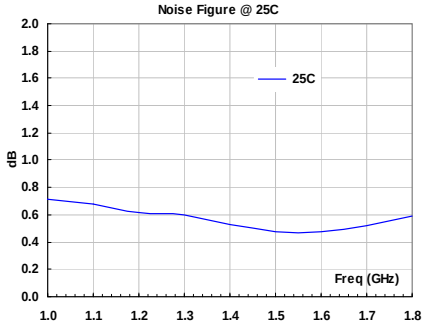
**Marking:** **WLA1216B**

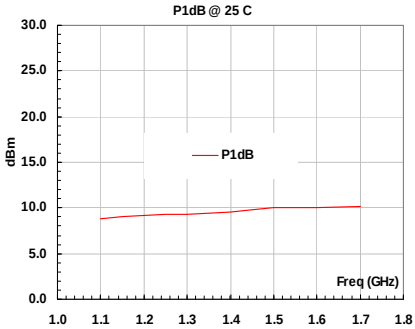
### Specifications (Tested at +25°C)

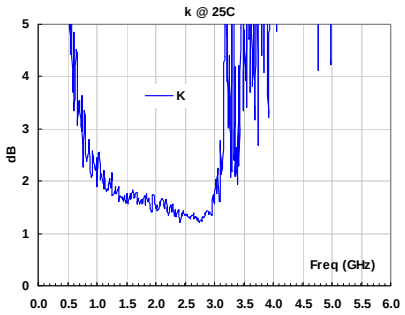
| tem | Symbol | Test Constraints | Min | Nom | Max | Unit |
|---|---|---|---|---|---|---|
| Frequency Range | BW | 50 Ohm Impedance | 1.2 | | 1.6 | GHz |
| Gain | $S_{21}$ | 1.2 – 1.6 GHz | 30.5 | 32.5 | 34.5 | dB |
| Noise Figure | NF | 1.2 – 1.6 GHz | | 0.5 | 0.7 | dB |
| VSWR | $SWR_i$ | 1.2 – 1.6 GHz, all RF ports | | 1.25:1 | 1.5:1 | Ratio |
| Gain Flatness | ΔG | 1.2 – 1.6 GHz | | +/- 1.0 | | dB |
| Reverse Isolation | $S_{12}$ | 1.2 – 1.6 GHz | | 43 | | dB |
| Output Power 1dB Compression Point | $P_{1dB}$ | 1.2 – 1.6 GHz | 8 | 10 | | dBm |
| Current Consumption | $I_{dd}$ | $V_{dd}$= +12.0 V | | 40 | | mA |
| Power Supply Operating Voltage | $V_{dd}$ | | +7 | +12 | +16 | V |
| Operating Temperature | $T_o$ | | -40 | | +85 | °C |
| Thermal Resistance | $R_{th,c}$ | Junction to case | | | 215 | °C/W |
| Maximum Average RF Input Power | $P_{IN, MAX}$ | DC – 12.0 GHz | | | 10 | dBm |

### Typical Performance




### Outline, IP-3