

WLA1116N

1.1 – 1.65 GHz, Low Noise Amplifier

April 2013, REV B



Key Features

- 1.1 ~ 1.65 GHz, 50 Ohm impedance
- 0.50 dB noise figure
- 32 dB gain
- 1.35:1 VSWR
- 7.0 dBm P_{1dB}
- Precision machined housing
- RoHS compliant

Applications

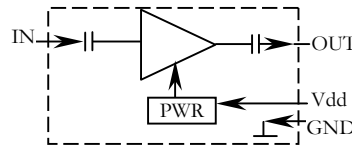
- GPS
- Receiver amplifiers
- RF bench tests
- Mobile base station applications



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

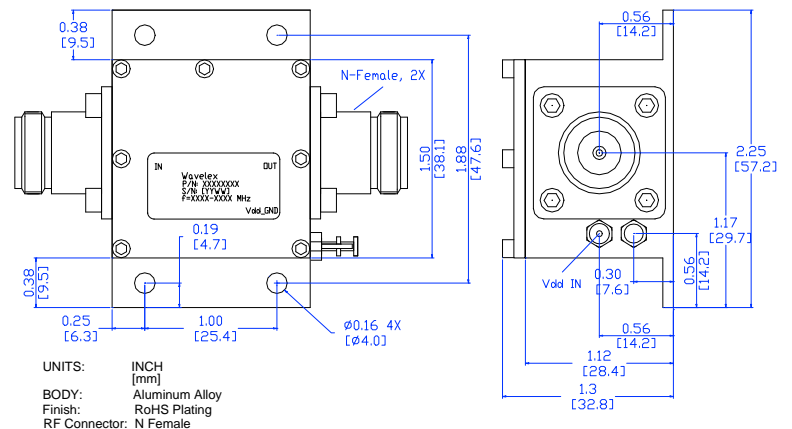
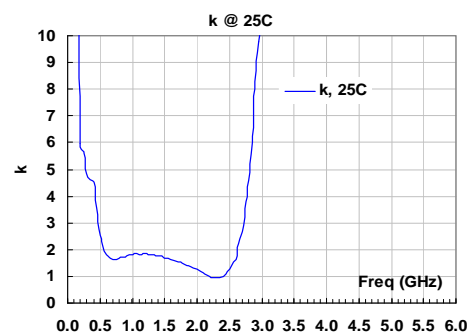
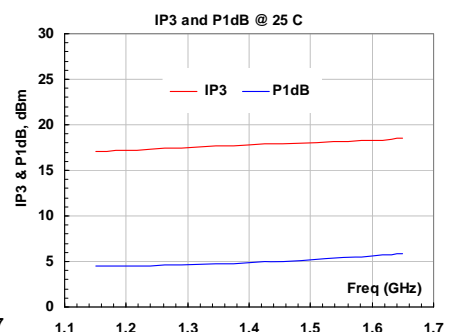
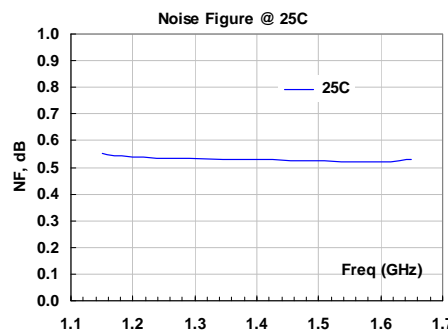
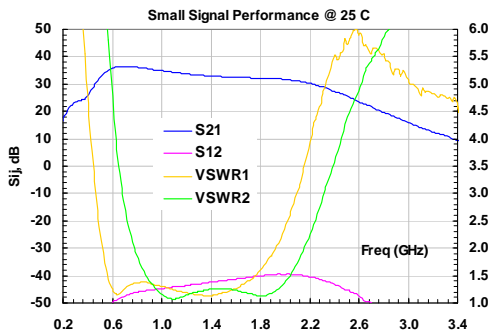
| Model | Connectors |
|----------|------------|
| WLA1116N | N Female |

Marking: WLA1116N

Specifications (Tested at +25°C)

| tem | Symbol | Test Constraints | Min | Nom | Max | Unit |
|---------------------------------------|-------------------|---|-----|---------|-------|-------|
| Frequency Range | BW | 50 Ohm Impedance | 1.1 | | 1.6 | GHz |
| Gain | S ₂₁ | 1.1 – 1.65 GHz | 31 | 32 | 35 | dB |
| Noise Figure | NF | 1.1 – 1.65 GHz | | 0.5 | 0.8 | dB |
| VSWR | SWR _i | 1.1 – 1.65 GHz, all RF ports | | 1.35:1 | 1.5:1 | Ratio |
| Gain Flatness | ΔG | 1.1 – 1.65 GHz | | +/- 1.0 | | dB |
| Reverse Isolation | S ₁₂ | 1.1 – 1.65 GHz | 40 | 45 | | Deg |
| Output Power 1dB Compression Point | P _{1dB} | 1.1 – 1.65 GHz | 4 | 7 | | dBm |
| Output-Third-Order Interception point | IP ₃ | Two-Tone, P _{out} = 0 dBm each, 1 MHz separation | 14 | 17 | | dBm |
| Current Consumption | I _{dd} | V _{dd} = +12.0 V | | 20 | | mA |
| Power Supply Operating Voltage | V _{dd} | | +8 | +12 | +16 | V |
| Operating Temperature | T _o | | -40 | | +85 | °C |
| Thermal Resistance | R _{th,c} | Junction to case | | | 215 | °C/W |

Typical Performance



Outline, IP-2

Specifications and information are subject to change without notice.