

## QLA-6000-18000-22-25

6~18GHz, 22dB, 2.5dB

### Features:

- \* Broadband
- \* Low Noise

### Applications:

- \* Wireless
- \* Receiver
- \* Laboratory Test
- \* Radar



### Description

This product series features ultra-wideband low-noise amplifiers (LNAs) operating from 6 to 18GHz. The lineup includes:

- LNA modules powered by 5-15V DC, where increasing supply voltage enhances gain and output power;
- LNA systems with integrated switching-mode power supplies (SMPS) accepting 85-265V AC input, recommended for most applications;
- LNA systems employing linear-regulated power supplies for 220V AC operation, delivering optimal performance where extreme power purity is critical.

### Electrical

|                      |                                                                                              |
|----------------------|----------------------------------------------------------------------------------------------|
| Frequency:           | 6~18GHz                                                                                      |
| Gain:                | 22dB typ.                                                                                    |
| Gain Flatness:       | ±1dB typ.                                                                                    |
| Output Power (P1dB): | 17dBm typ.                                                                                   |
| Output Power (Psat): | 18dBm typ.                                                                                   |
| Noise Figure:        | 2.5dB typ.                                                                                   |
| Spurious:            | -60dBc max.                                                                                  |
| VSWR:                | 1.8 typ.                                                                                     |
| Reverse Isolation:   | -40dB typ.                                                                                   |
| Voltage:             | +5V DC (Outline A)<br>+6~15V DC (Outline B)<br>85~265V AC (Outline C)<br>220V AC (Outline D) |
| Current:             | 90mA typ. (Outline A, B)                                                                     |
| Impedance:           | 50Ω                                                                                          |

### Absolute Maximum Ratings\*1

|                 |                                     |
|-----------------|-------------------------------------|
| RF Input Power: | +18dBm                              |
| Voltage:        | +6V (Outline A)<br>+20V (Outline B) |

[1] Permanent damage may occur if any of these limits are exceeded.

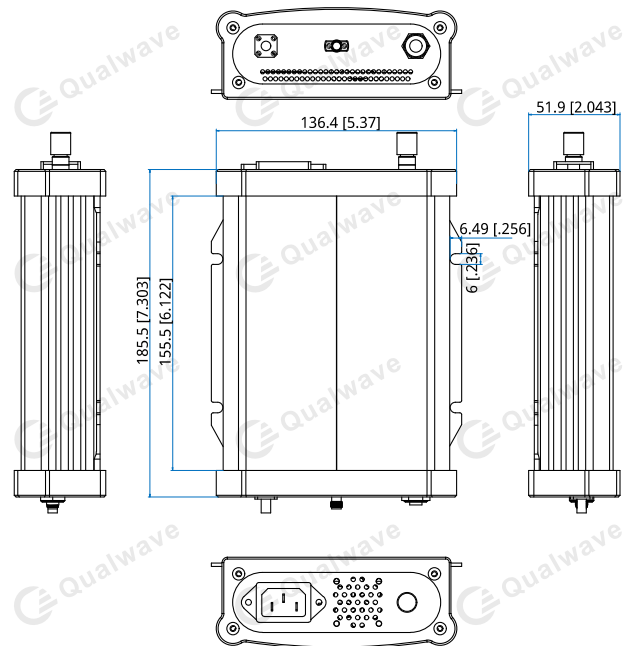
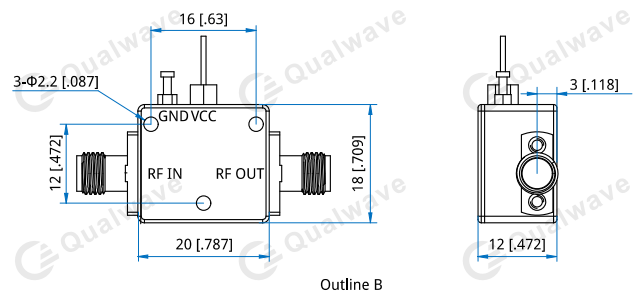
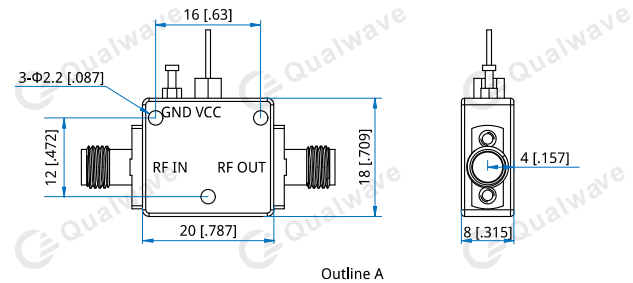
### Mechanical

RF Connectors: SMA Female (Removable)

### Environmental

|                            |            |
|----------------------------|------------|
| Operating Temperature:     | -45~+85°C  |
| Non-operating Temperature: | -55~+125°C |

### Outline Drawings



## How To Order

**QLA-6000-18000-22-25** - Outline A

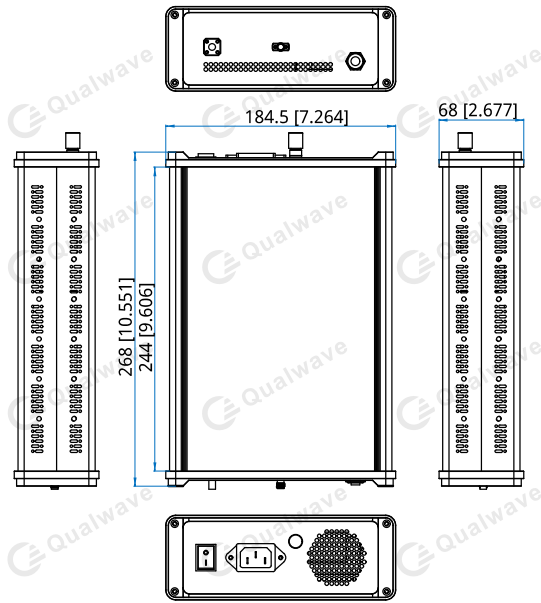
**QLA-6000-18000-22-25-1** - Outline B

**QLAS-6000-18000-22-25** - Outline C, AC-powered unit integrates a switching-mode power supply.

**QLAS-6000-18000-22-25-1** - Outline D, AC-powered unit integrates a linear-regulated power supply.

Customization is available upon request.

## Low Noise Amplifier



Outline D: Enclosure 0-000006

Unit: mm [in] Tolerance:  $\pm 0.5\text{mm}$  [ $\pm 0.02\text{in}$ ]

## Typical Performance Curves

