

QLA-10-20000-18-25

10MHz~20GHz, 18dB, 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 10MHz to 20GHz. The lineup includes:

- LNA modules powered by 5-8V 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:	10MHz~20GHz
Gain:	18dB typ.
Gain Flatness:	±1dB typ.
Output Power (P1dB):	12dBm typ. @+5V 17dBm typ. @+8V
Noise Figure:	2.5dB typ.
Spurious:	-60dBc max.
VSWR:	1.8 typ.
Reverse Isolation:	-25dB typ.
Voltage:	+5V~+8V DC (Outline A) 85~265V AC (Outline B) 220V AC (Outline C)
Current:	100mA typ. (Outline A)
Impedance:	50Ω

Absolute Maximum Ratings*1

RF Input Power:	+15dBm
Voltage:	+9V (Outline A)

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

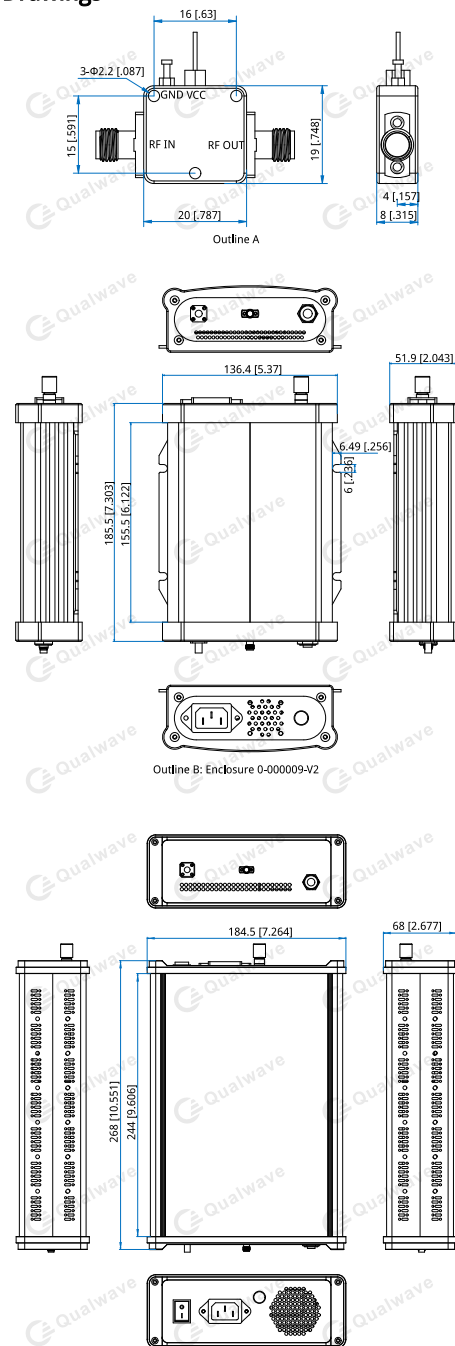
Mechanical

RF Connectors:	SMA Female (Removable)
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Environmental

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

Outline Drawings



Unit: mm [in]

Tolerance: ±0.5mm [±0.02in]

How To Order

[QLA-10-20000-18-25](#) - Outline A

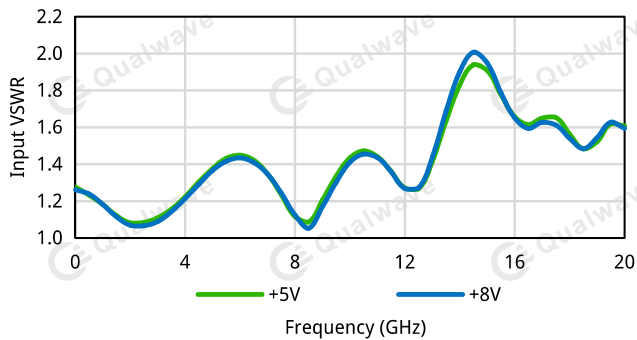
[QLAS-10-20000-18-25](#) - Outline B, AC-powered unit integrates a switching-mode power supply.

[QLAS-10-20000-18-25-1](#) - Outline C, AC-powered unit integrates a linear-regulated power supply.

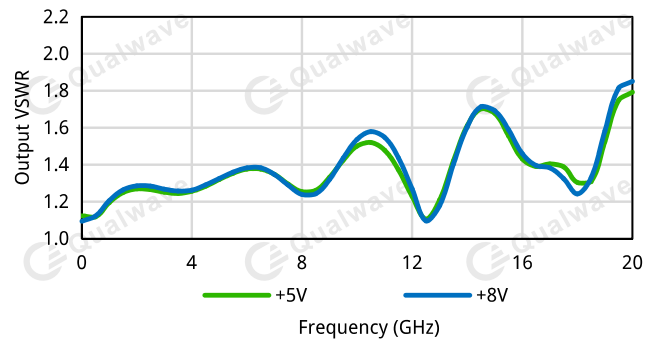
Customization is available upon request.

Typical Performance Curves

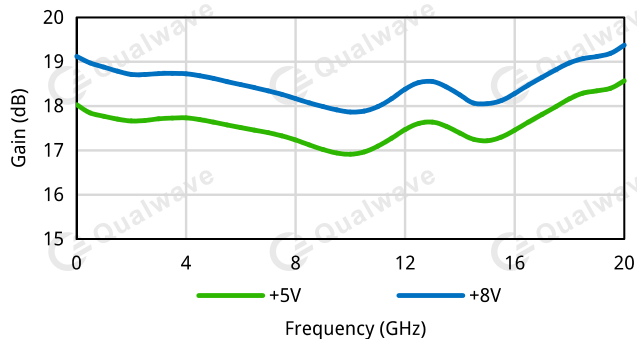
Input VSWR vs. Frequency



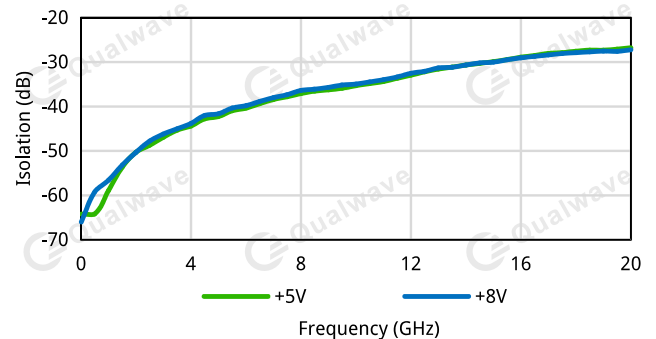
Output VSWR vs. Frequency



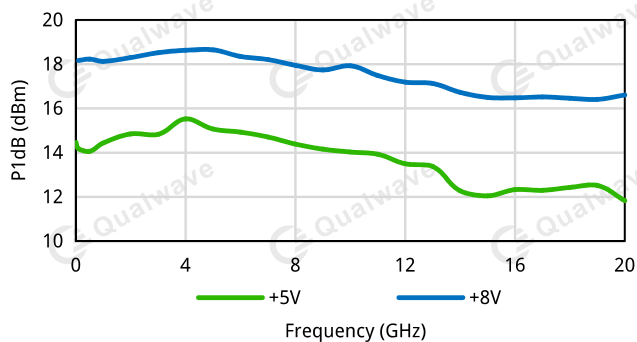
Gain vs. Frequency



Isolation vs. Frequency



P1dB vs. Frequency



Noise Figure vs. Frequency

