# True DC-Coupled 500 MHz Low-Noise Voltage Amplifier


## Features

- **Gain 20 dB (x10)**
- **Bandwidth DC ... 500 MHz**
- **True DC-Coupling, Adjustable Output Offset Voltage**
- **3.0 nV/√Hz Input Noise**

## Applications

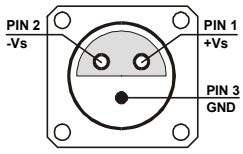
- **Oscilloscope and Transient Recorder Preamplifier**
- **Ideal for Analyzing Digital Signals (No Baseline Shift at any Digital Code)**
- **Photomultiplier and Microchannel Plate Amplifier**
- **Signal Booster for Optical Receivers and Current Amplifiers**
- **Time-Resolved Pulse and Transient Measurements**

## Specifications

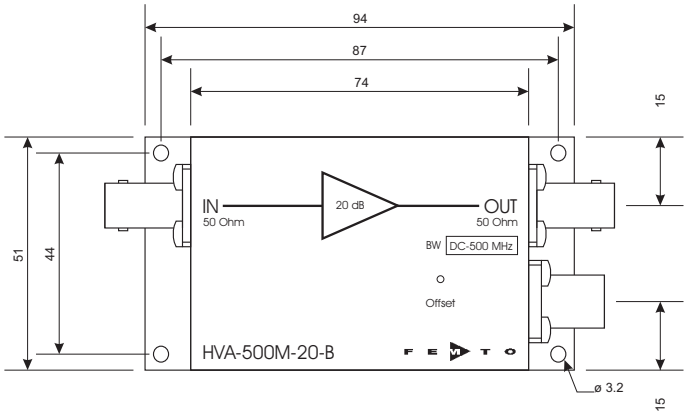
| | | |
|---|---|---|
| | Test Conditions | Vs = ± 15 V, Ta = 25°C |
| Gain | Gain | 20 dB (@ 50 Ω load) |
| | Gain Accuracy | ± 0.2 dB |
| Frequency Response | Lower Cut-Off Frequency | DC |
| | Upper Cut-Off Frequency (-3 dB) | 500 MHz (± 10 %) |
| | Rise/Fall Time (10% - 90%) | 750 ps |
| Input | Input Impedance | 50 Ω ll 3 pF |
| | Input Voltage Noise | 3.0 nV/√Hz (@ 200 MHz) |
| | Integrated Input Noise | 0.5 mV peak-peak |
| | Input Bias Current | 15 µA typ. |
| | Input Offset Voltage | 1 mV typ. |
| | Input Voltage Drift | 10 µV / °C |
| Output | Output Impedance | 50 Ω (terminate with 50 Ω load for best performance) |
| | Output Voltage | ± 1 V (@ 50 Ω load, for linear amplification) |
| | Max. Output Current | 100 mA |
| | Output Offset Trimmer Range | ± 100 mV |
| | Slew Rate | 2,600 V/µs (@ 50 Ω load) |
| Power Supply | Supply Voltage | ± 15 V |
| | Supply Current | ± 40 mA typ.<br>(depends on operating conditions, recommended power supply capability minimum ± 150 mA) |
| Case | Weight | 200 g (0.5 lbs) |
| | Material | AlMg4.5Mn, nickel-plated |

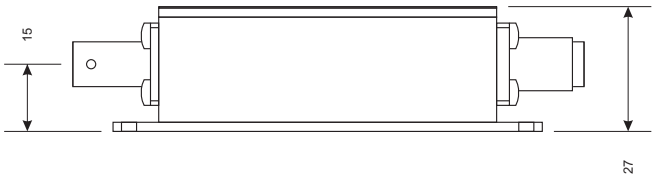
# True DC-Coupled 500 MHz Low-Noise Voltage Amplifier

| | | |
|---|---|---|
| Specifications (continued) | | |
| Temperature Range | Storage Temperature | - 40 ... + 100 °C |
| | Operating Temperature | 0 ... + 60 °C |
| Absolute Maximum Ratings | Power Supply Voltage | ± 20 V |
| | Input Voltage | ± 5 V |
| Connectors | Input | BNC |
| | Output | BNC |
| | Power Supply | LEMO series 1S, 3-pin fixed socket<br>Pin 1: + 15V<br>Pin 2: - 15V<br>Pin 3: GND |




Dimensions




all measures in mm unless otherwise noted

DZ_HVA-500M-20_R2

FEMTO Messtechnik GmbH
Klosterstr. 64
10179 Berlin · Germany
Phone: +49 30 280 4711-0
Fax: +49 30 280 4711-11
Email: info@femto.de
www.femto.de