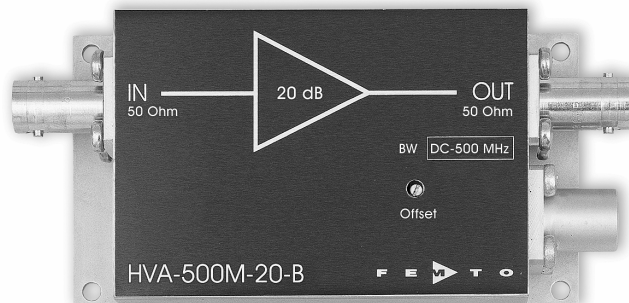


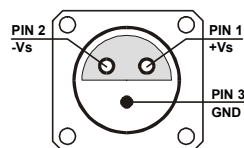
# True DC-Coupled 500 MHz Low Noise Voltage Amplifier



Features	<ul style="list-style-type: none"> <li>• <b>Gain 20 dB (x10)</b></li> <li>• <b>Bandwidth DC ... 500 MHz</b></li> <li>• <b>True DC-Coupling, Adjustable Output Offset Voltage</b></li> <li>• <b>3.0 nV/√Hz Input Noise</b></li> </ul>																																																
Applications	<ul style="list-style-type: none"> <li>• <b>Oscilloscope and Transient Recorder Preamp</b></li> <li>• <b>Ideal for Analyzing Digital Signals (No Baseline Shift at any Digital Code)</b></li> <li>• <b>Photomultiplier and Microchannel Plate Amplifier</b></li> <li>• <b>Signal Booster for Optical Receivers and Current Amplifiers</b></li> <li>• <b>Time-Resolved Pulse and Transient Measurements</b></li> </ul>																																																
Specifications	<p><i>Test Conditions</i> <span style="float: right;"><i>Vs = ± 15 V, Ta = 25°C</i></span></p> <table border="0" style="width: 100%;"> <tr> <td style="width: 20%; vertical-align: top;">Gain</td> <td style="width: 60%;">Gain</td> <td style="width: 20%;">20 dB (@ 50 Ω load)</td> </tr> <tr> <td></td> <td>Gain Accuracy</td> <td>± 0.2 dB</td> </tr> <tr> <td rowspan="3">Frequency Response</td> <td>Lower Cut-Off Frequency</td> <td>DC</td> </tr> <tr> <td>Upper Cut-Off Frequency (-3 dB)</td> <td>500 MHz (± 10 %)</td> </tr> <tr> <td>Rise/Fall Time (10% - 90%)</td> <td>750 ps</td> </tr> <tr> <td rowspan="6">Input</td> <td>Input Impedance</td> <td>50 Ω    3 pF</td> </tr> <tr> <td>Input Voltage Noise</td> <td>3.0 nV/√Hz (@ 200 MHz)</td> </tr> <tr> <td>Integrated Input Noise</td> <td>0.5 mV peak-peak</td> </tr> <tr> <td>Input Bias Current</td> <td>15 µA typ.</td> </tr> <tr> <td>Input Offset Voltage</td> <td>1 mV typ.</td> </tr> <tr> <td>Input Voltage Drift</td> <td>10 µV / °C</td> </tr> <tr> <td rowspan="5">Output</td> <td>Output Impedance</td> <td>50 Ω (terminate with 50 Ω load for best performance)</td> </tr> <tr> <td>Output Voltage</td> <td>± 1 V (@ 50 Ω load, for linear amplification)</td> </tr> <tr> <td>Max. Output Current</td> <td>100 mA</td> </tr> <tr> <td>Output Offset Trimmer Range</td> <td>± 100 mV</td> </tr> <tr> <td>Slew Rate</td> <td>2,600 V/µs (@ 50 Ω load)</td> </tr> <tr> <td rowspan="2">Power Supply</td> <td>Supply Voltage</td> <td>± 15 V</td> </tr> <tr> <td>Supply Current</td> <td>± 40 mA typ. (depends on operating conditions, recommended power supply capability minimum ± 150 mA)</td> </tr> <tr> <td rowspan="2">Case</td> <td>Weight</td> <td>200 g (0.5 lbs)</td> </tr> <tr> <td>Material</td> <td>AlMg4.5Mn, nickel-plated</td> </tr> </table>		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    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. (depends on operating conditions, recommended power supply capability minimum ± 150 mA)	Case	Weight	200 g (0.5 lbs)	Material	AlMg4.5Mn, nickel-plated
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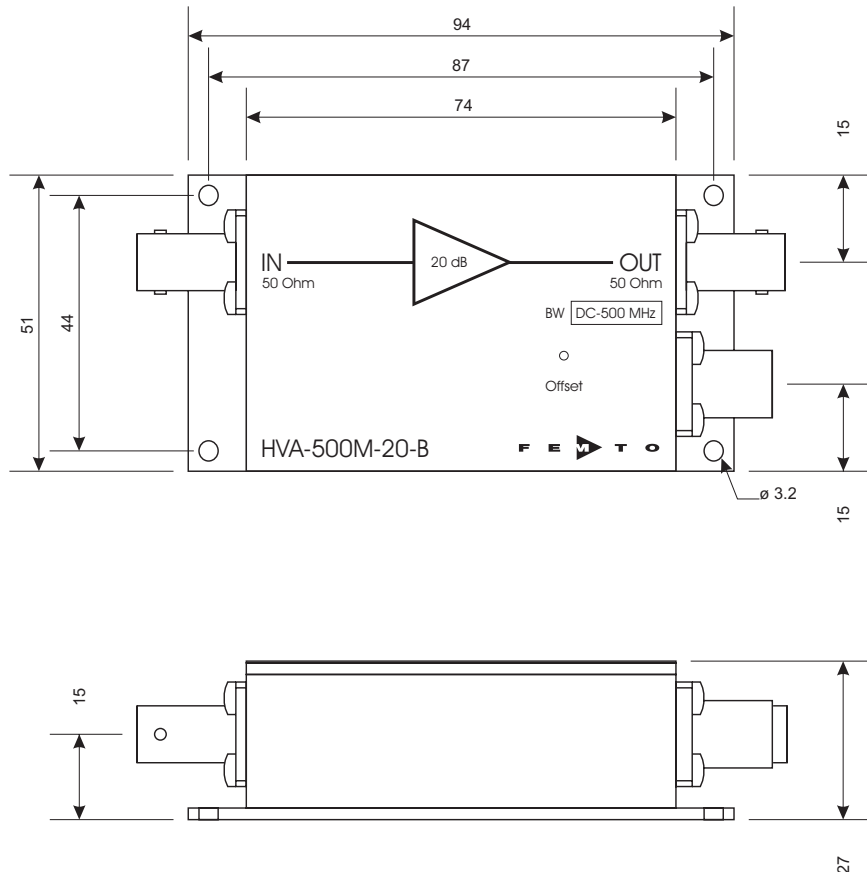
## True DC-Coupled 500 MHz Low Noise Voltage Amplifier

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 Pin 1:                              + 15V Pin 2:                              - 15V Pin 3:                              GND



# True DC-Coupled 500 MHz Low Noise Voltage Amplifier

Dimensions



all measures in mm unless otherwise noted

DZ\_HVA-500M-20\_R2

FEMTO Messtechnik GmbH  
 Klosterstr. 64  
 D-10179 Berlin · Germany  
 Tel.: +49-(0)30-280 4711-0  
 Fax: +49-(0)30-280 4711-11  
 e-mail: info@femto.de  
 http://www.femto.de

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