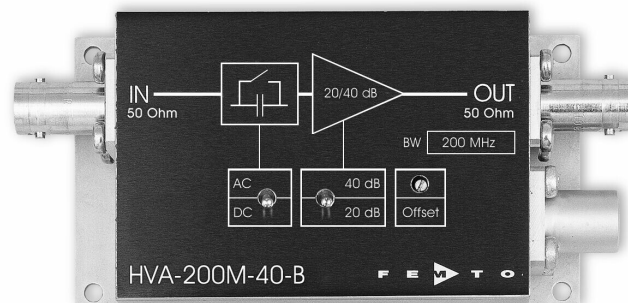


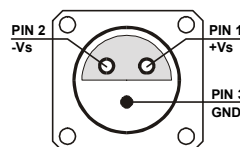
## 200 MHz Low-Noise Voltage Amplifier



Features	<ul style="list-style-type: none"> <li>• <b>Switchable Gain 20/40 dB (x10 / x100)</b></li> <li>• <b>Bandwidth DC ... 200 MHz</b></li> <li>• <b>Low Input Noise of 1.2 nV/√Hz</b></li> <li>• <b>Switchable AC/DC Coupling</b></li> </ul>																																																																
Applications	<ul style="list-style-type: none"> <li>• <b>Oscilloscope and Transient Recorder Preamplifier</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"> <tr> <td style="vertical-align: top;">Gain</td> <td>Gain</td> <td>20/40 dB switchable</td> </tr> <tr> <td></td> <td>Gain Accuracy</td> <td>± 0.2 dB</td> </tr> <tr> <td style="vertical-align: top;">Frequency Response</td> <td>Lower Cut-Off Frequency (-3 dB)</td> <td>DC/1 kHz switchable</td> </tr> <tr> <td></td> <td>Upper Cut-Off Frequency (-3 dB)</td> <td>200 MHz</td> </tr> <tr> <td></td> <td>Rise/Fall Time (10% - 90%)</td> <td>1.8 ns</td> </tr> <tr> <td style="vertical-align: top;">Input</td> <td>Input Impedance</td> <td>50 Ω    12 pF</td> </tr> <tr> <td></td> <td>Input Voltage Noise</td> <td>1.2 nV/√Hz (@ 50 MHz, 40 dB gain)</td> </tr> <tr> <td></td> <td></td> <td>3.5 nV/√Hz (@ 50 MHz, 20 dB gain)</td> </tr> <tr> <td></td> <td>Intregated Input Noise</td> <td>150 μV peak-peak (@ 40 dB gain)</td> </tr> <tr> <td></td> <td></td> <td>400 μV peak-peak (@ 20 dB gain)</td> </tr> <tr> <td></td> <td>Input Bias Current</td> <td>20 μA</td> </tr> <tr> <td></td> <td>Input Offset Voltage</td> <td>500 μV typ.</td> </tr> <tr> <td></td> <td>Input Voltage Drift</td> <td>1 μV/°C</td> </tr> <tr> <td style="vertical-align: top;">Output</td> <td>Output Impedance</td> <td>50 Ω (terminate with 50 Ω load for best performance)</td> </tr> <tr> <td></td> <td>Output Voltage</td> <td>± 1 V (@ 50 Ω load, for linear amplification)</td> </tr> <tr> <td></td> <td>Max. Output Current</td> <td>60 mA</td> </tr> <tr> <td></td> <td>Output Offset Trimmer Range</td> <td>± 100 mV</td> </tr> <tr> <td></td> <td>Slew Rate</td> <td>500 V/μs (@ 20 dB, 50 Ω load)</td> </tr> <tr> <td></td> <td></td> <td>1,000 V/μs (@ 40 dB, 50 Ω load)</td> </tr> <tr> <td style="vertical-align: top;">Power Supply</td> <td>Supply Voltage</td> <td>± 15 V</td> </tr> <tr> <td></td> <td>Supply Current</td> <td>± 70 mA typ. (depends on operating conditions, recommended power supply capability min. ± 150 mA)</td> </tr> </table>		Gain	Gain	20/40 dB switchable		Gain Accuracy	± 0.2 dB	Frequency Response	Lower Cut-Off Frequency (-3 dB)	DC/1 kHz switchable		Upper Cut-Off Frequency (-3 dB)	200 MHz		Rise/Fall Time (10% - 90%)	1.8 ns	Input	Input Impedance	50 Ω    12 pF		Input Voltage Noise	1.2 nV/√Hz (@ 50 MHz, 40 dB gain)			3.5 nV/√Hz (@ 50 MHz, 20 dB gain)		Intregated Input Noise	150 μV peak-peak (@ 40 dB gain)			400 μV peak-peak (@ 20 dB gain)		Input Bias Current	20 μA		Input Offset Voltage	500 μV typ.		Input Voltage Drift	1 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	60 mA		Output Offset Trimmer Range	± 100 mV		Slew Rate	500 V/μs (@ 20 dB, 50 Ω load)			1,000 V/μs (@ 40 dB, 50 Ω load)	Power Supply	Supply Voltage	± 15 V		Supply Current	± 70 mA typ. (depends on operating conditions, recommended power supply capability min. ± 150 mA)
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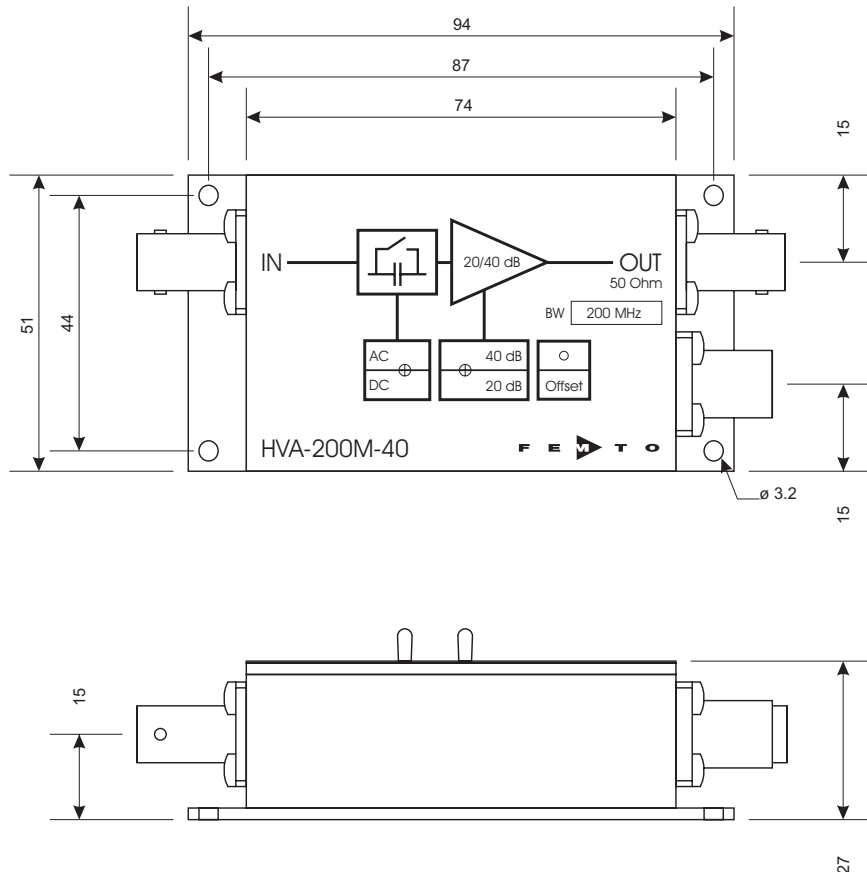
## 200 MHz Low-Noise Voltage Amplifier

Specifications (continued)		
Case	Weight Material	200 g (0.5 lbs) AlMg4.5Mn, nickel-plated
Temperature Range	Storage Temperature Operating Temperature	- 40 ... + 100 °C 0 ... + 60 °C
Absolute Maximum Ratings	Power Supply Voltage Input Voltage	± 20 V ± 5 V
Connectors	Input  Output  Power Supply	BNC  BNC  LEMO series 1S, 3-pin fixed socket Pin 1: + 15V Pin 2: - 15V Pin 3: GND



# 200 MHz Low-Noise Voltage Amplifier

Dimensions



all measures in mm unless otherwise noted

DZ\_HVA-200M-40\_R2

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