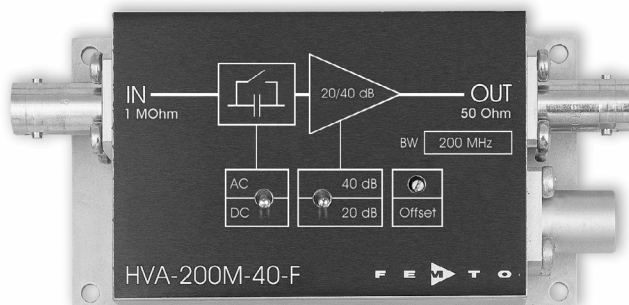




Datasheet

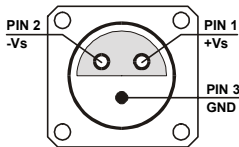
HVA-200M-40-F

200 MHz High Input Impedance Voltage Amplifier



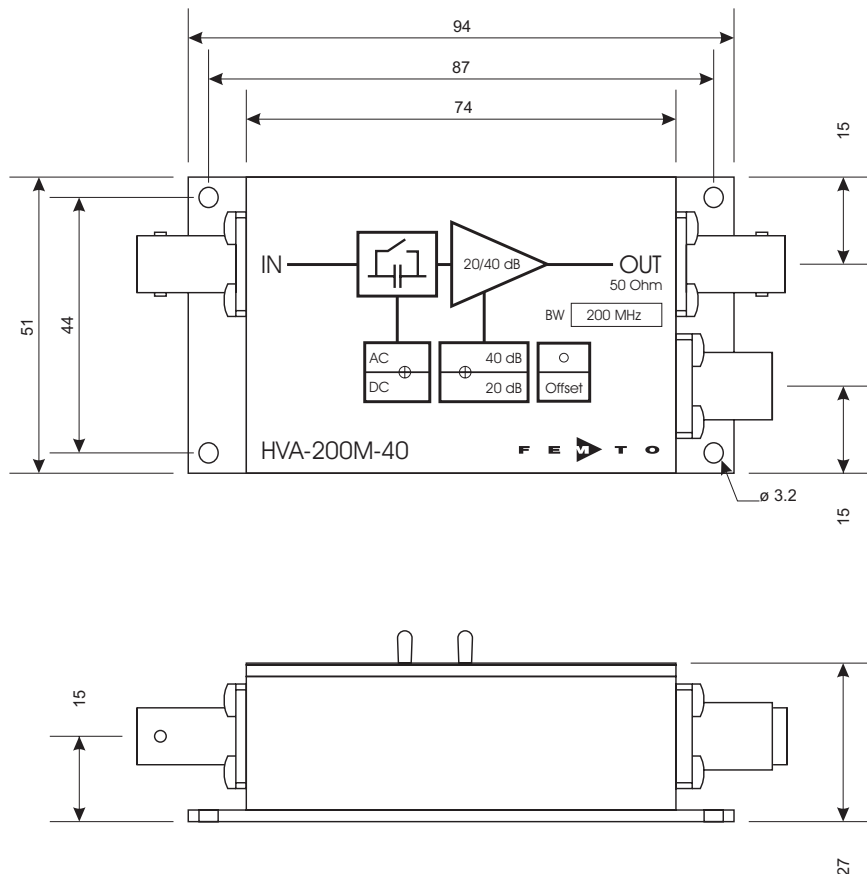
Features	<ul style="list-style-type: none"> • Switchable Gain 20/40 dB (x10 / x100) • Bandwidth DC ... 200 MHz • High Input Impedance 1 MΩ • Switchable AC/DC Coupling 																																														
Applications	<ul style="list-style-type: none"> • Oscilloscope and Transient Recorder Preamplifier • Photomultiplier and Microchannel Plate Amplifier • Signal Booster for Optical Receivers and Current Amplifiers • Time-Resolved Pulse and Transient Measurements 																																														
Specifications	<table border="0"> <tr> <td></td> <td><i>Test Conditions</i></td> <td><i>V_s = ± 15 V, T_a = 25°C</i></td> </tr> <tr> <td rowspan="2">Gain</td> <td>Gain</td> <td>20/40 dB switchable</td> </tr> <tr> <td>Gain Accuracy</td> <td>± 0.2 dB</td> </tr> <tr> <td rowspan="3">Frequency Response</td> <td>Lower Cut-Off Frequency (-3 dB)</td> <td>DC/1 Hz switchable</td> </tr> <tr> <td>Upper Cut-Off Frequency (-3 dB)</td> <td>200 MHz</td> </tr> <tr> <td>Rise/Fall Time (10% - 90%)</td> <td>1.8 ns</td> </tr> <tr> <td rowspan="6">Input</td> <td>Input Impedance</td> <td>1 MΩ 15 pF</td> </tr> <tr> <td rowspan="2">Input Voltage Noise</td> <td>4.5 nV/√Hz (@ 50 MHz, 40 dB gain)</td> </tr> <tr> <td>5.5 nV/√Hz (@ 50 MHz, 20 dB gain)</td> </tr> <tr> <td rowspan="2">Intregated Input Noise</td> <td>450 μV peak-peak (@ 40 dB gain)</td> </tr> <tr> <td>600 μV peak-peak (@ 20 dB gain)</td> </tr> <tr> <td>Input Bias Current</td> <td>10 pA</td> </tr> <tr> <td>Input Offset Voltage</td> <td>500 μV typ.</td> </tr> <tr> <td>Input Voltage Drift</td> <td>5 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>60 mA</td> </tr> <tr> <td>Output Offset Trimmer Range</td> <td>± 100 mV</td> </tr> <tr> <td>Slew Rate</td> <td>600 V/μs (@ 20 dB, 50 Ω load) 1,100 V/μs (@ 40 dB, 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>± 70 mA typ. (depends on operating conditions, recommended power supply capability min. ± 150 mA)</td> </tr> </table>		<i>Test Conditions</i>	<i>V_s = ± 15 V, T_a = 25°C</i>	Gain	Gain	20/40 dB switchable	Gain Accuracy	± 0.2 dB	Frequency Response	Lower Cut-Off Frequency (-3 dB)	DC/1 Hz switchable	Upper Cut-Off Frequency (-3 dB)	200 MHz	Rise/Fall Time (10% - 90%)	1.8 ns	Input	Input Impedance	1 MΩ 15 pF	Input Voltage Noise	4.5 nV/√Hz (@ 50 MHz, 40 dB gain)	5.5 nV/√Hz (@ 50 MHz, 20 dB gain)	Intregated Input Noise	450 μV peak-peak (@ 40 dB gain)	600 μV peak-peak (@ 20 dB gain)	Input Bias Current	10 pA	Input Offset Voltage	500 μV typ.	Input Voltage Drift	5 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	600 V/μs (@ 20 dB, 50 Ω load) 1,100 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 High Input Impedance 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 Transient Input Voltage	± 20 V ± 5 V 200 V (out of a 200 pF source)
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 High Input Impedance Voltage Amplifier

Dimensions



all measures in mm unless otherwise noted

DZ_HVA-200M-40_R2

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