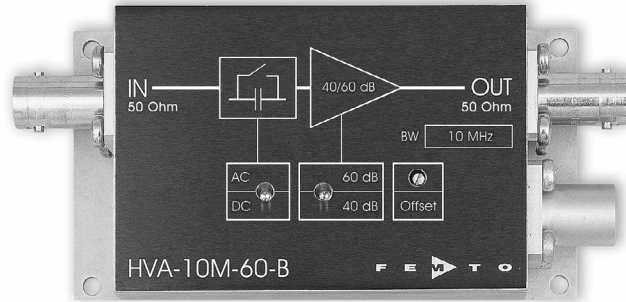




Datasheet

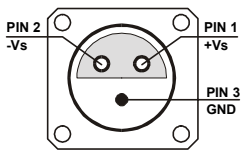
HVA-10M-60-B

10 MHz Low-Noise Voltage Amplifier



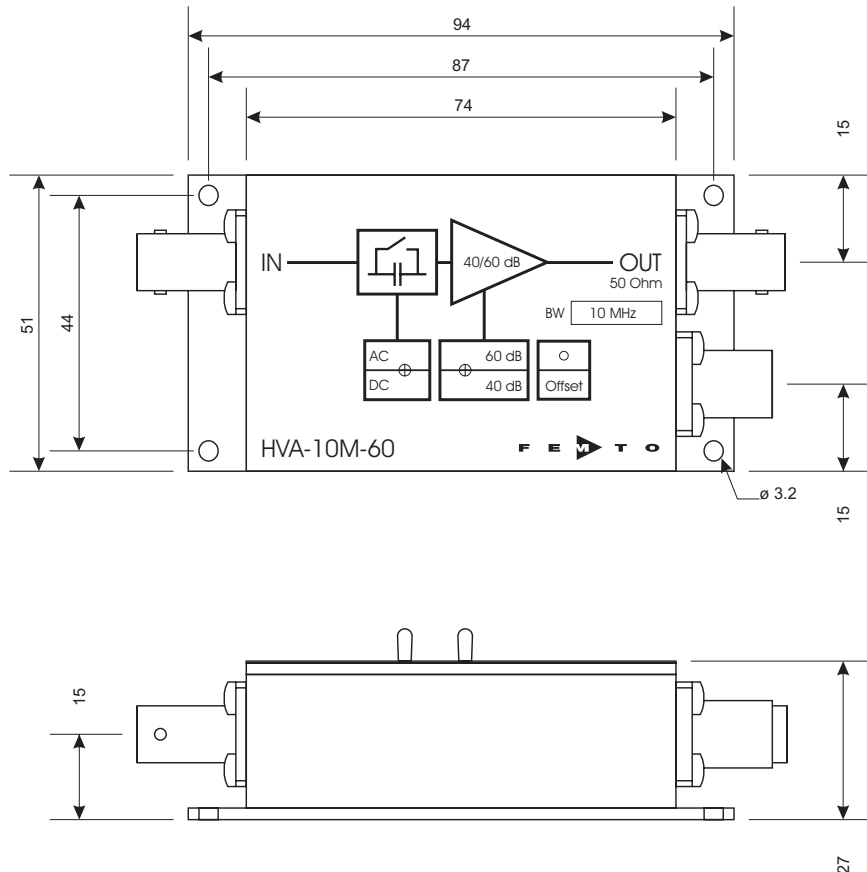
Features	<ul style="list-style-type: none"> • Switchable Gain 40/60 dB (x100 / x1,000) • Bandwidth DC ... 10 MHz • Low Input Noise of 0.9 nV/√Hz • Switchable AC/DC Coupling 																																																																			
Applications	<ul style="list-style-type: none"> • Oscilloscope and Transient Recorder Preamplifier • Photomultiplier and Microchannel Plate Amplifier • Signal Booster for Optical Receivers and Current Amplifiers • Time-Resolved Pulse and Transient Measurements 																																																																			
Specifications	<p><i>Test Conditions</i> <i>Vs = ± 15 V, Ta = 25°C</i></p> <table border="0" style="width: 100%;"> <tr> <td style="width: 20%;">Gain</td> <td style="width: 30%;">Gain</td> <td style="width: 50%;">40/60 dB switchable</td> </tr> <tr> <td></td> <td>Gain Accuracy</td> <td>± 0.2 dB</td> </tr> <tr> <td>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>10 MHz</td> </tr> <tr> <td></td> <td>Rise/Fall Time (10% - 90%)</td> <td>35 ns</td> </tr> <tr> <td>Input</td> <td>Input Impedance</td> <td>50 Ω 12 pF</td> </tr> <tr> <td></td> <td>Input Voltage Noise</td> <td>0.9 nV/√Hz (@ 2 MHz, 60 dB gain)</td> </tr> <tr> <td></td> <td></td> <td>1.8 nV/√Hz (@ 2 MHz, 40 dB gain)</td> </tr> <tr> <td></td> <td>Intregated Input Noise</td> <td>20 μV peak-peak (@ 60 dB gain)</td> </tr> <tr> <td></td> <td></td> <td>50 μV peak-peak (@ 40 dB gain)</td> </tr> <tr> <td></td> <td>Input Bias Current</td> <td>18 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>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>± 3.5 V (@ 50 Ω load, for linear amplification)</td> </tr> <tr> <td></td> <td>Max. Output Current</td> <td>100 mA</td> </tr> <tr> <td></td> <td>Output Offset Trimmer Range</td> <td>± 500 mV</td> </tr> <tr> <td></td> <td>Slew Rate</td> <td>500 V/μs (@ 50 Ω load)</td> </tr> <tr> <td>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> <tr> <td>Case</td> <td>Weight</td> <td>200 g (0.5 lbs)</td> </tr> <tr> <td></td> <td>Material</td> <td>AlMg4.5Mn, nickel-plated</td> </tr> </table>		Gain	Gain	40/60 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)	10 MHz		Rise/Fall Time (10% - 90%)	35 ns	Input	Input Impedance	50 Ω 12 pF		Input Voltage Noise	0.9 nV/√Hz (@ 2 MHz, 60 dB gain)			1.8 nV/√Hz (@ 2 MHz, 40 dB gain)		Intregated Input Noise	20 μV peak-peak (@ 60 dB gain)			50 μV peak-peak (@ 40 dB gain)		Input Bias Current	18 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	± 3.5 V (@ 50 Ω load, for linear amplification)		Max. Output Current	100 mA		Output Offset Trimmer Range	± 500 mV		Slew Rate	500 V/μs (@ 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)	Case	Weight	200 g (0.5 lbs)		Material	AlMg4.5Mn, nickel-plated
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10 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
		

10 MHz Low-Noise Voltage Amplifier

Dimensions



all measures in mm unless otherwise noted

DZ_HVA-10M-60_R2

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