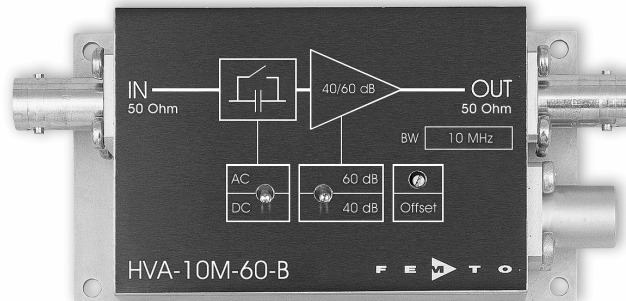




Datasheet

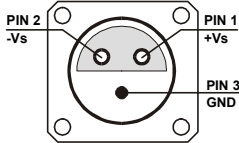
HVA-10M-60-B

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"> <tr> <td style="vertical-align: top;">Gain</td> <td>Gain</td> <td>40/60 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>10 MHz</td> </tr> <tr> <td></td> <td>Rise/Fall Time (10% - 90%)</td> <td>35 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>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>Intregrated 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 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>± 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 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> <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)		Intregrated 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
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)																																																																		
	Intregrated 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																																																																		

Datasheet**HVA-10M-60-B****10 MHz Low-Noise
Voltage Amplifier**

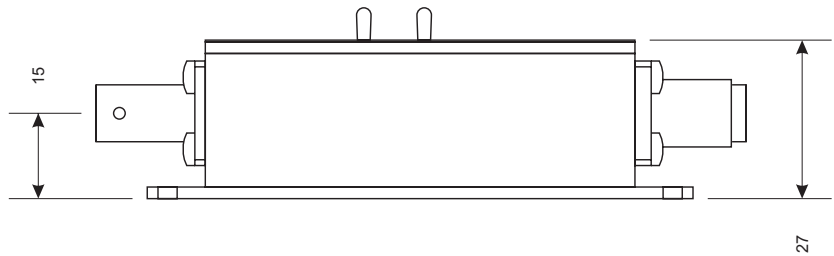
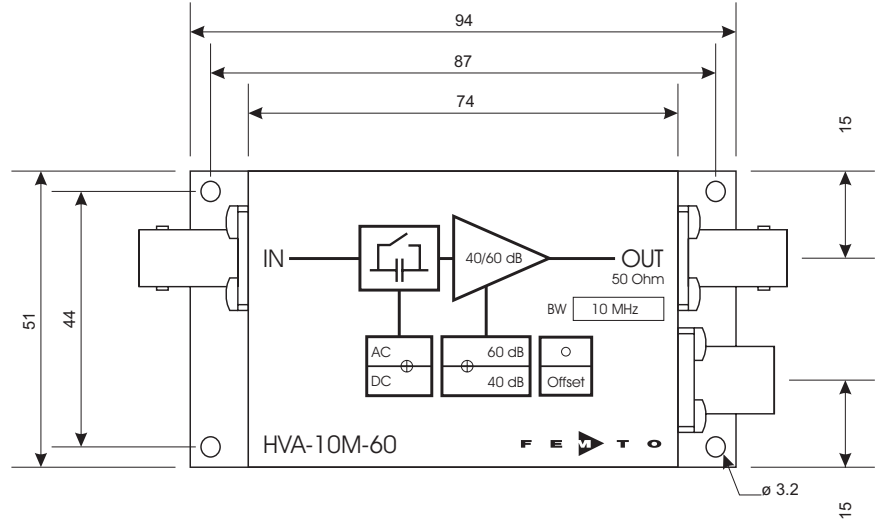
Specifications (continued)		
Temperature Range	Storage Temperature	- 40 ... + 100 °C
	Operating Temperature	0 ... + 60 °C
Absolute Maximum Ratings	Power Supply Voltage	± 20 V
	Input Voltage	± 5 V
Connectors	Input	BNC
	Output	BNC
	Power Supply	LEMO series 1S, 3-pin fixed socket Pin 1: + 15V Pin 2: - 15V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

Datasheet

HVA-10M-60-B

10 MHz Low-Noise Voltage Amplifier

Dimensions



all measures in mm unless otherwise noted

DZ_HVA-10M-60_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>

Specifications are subject to change without notice. Information furnished herein is believed to be accurate and reliable. However, no responsibility is assumed by FEMTO Messtechnik GmbH for its use, nor for any infringement of patents or other rights granted by implication or otherwise under any patent rights of FEMTO Messtechnik GmbH. Product names mentioned may also be trademarks used here for identification purposes only.

© by FEMTO Messtechnik GmbH
 Printed in Germany

SOPHISTICATED TOOLS FOR SIGNAL RECOVERY

