

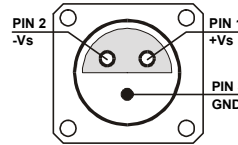
# 10 MHz High Input Impedance Voltage Amplifier



<p>Features</p>	<ul style="list-style-type: none"> <li>• <b>Switchable Gain 40/60 dB (x100 / x1,000)</b></li> <li>• <b>Bandwidth DC ... 10 MHz</b></li> <li>• <b>High Input Impedance 1 MΩ</b></li> <li>• <b>Switchable AC/DC Coupling</b></li> </ul>																																																																
<p>Applications</p>	<ul style="list-style-type: none"> <li>• <b>Oscilloscope and Transient Recorder Pre-amplifier</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>																																																																
<p>Specifications</p>	<table border="0"> <tr> <td>Test Conditions</td> <td colspan="2">Vs = ± 15 V, Ta = 25°C</td> </tr> <tr> <td>Gain</td> <td>Gain</td> <td>40/60 dB switchable (@ 50 Ω load)</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 Hz 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>1 MΩ    15 pF</td> </tr> <tr> <td></td> <td>Input Voltage Noise</td> <td>4.7 nV/√Hz (@ 2 MHz)</td> </tr> <tr> <td></td> <td>Intregated Input Noise</td> <td>100 μV peak-peak</td> </tr> <tr> <td></td> <td>Input Bias Current</td> <td>2 pA</td> </tr> <tr> <td></td> <td>Input Offset Voltage</td> <td>250 μV max.</td> </tr> <tr> <td></td> <td>Input Voltage Drift</td> <td>2 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>		Test Conditions	Vs = ± 15 V, Ta = 25°C		Gain	Gain	40/60 dB switchable (@ 50 Ω load)		Gain Accuracy	± 0.2 dB	Frequency Response	Lower Cut-Off Frequency (-3 dB)	DC/1 Hz switchable		Upper Cut-Off Frequency (-3 dB)	10 MHz		Rise/Fall Time (10% - 90%)	35 ns	Input	Input Impedance	1 MΩ    15 pF		Input Voltage Noise	4.7 nV/√Hz (@ 2 MHz)		Intregated Input Noise	100 μV peak-peak		Input Bias Current	2 pA		Input Offset Voltage	250 μV max.		Input Voltage Drift	2 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
Test Conditions	Vs = ± 15 V, Ta = 25°C																																																																
Gain	Gain	40/60 dB switchable (@ 50 Ω load)																																																															
	Gain Accuracy	± 0.2 dB																																																															
Frequency Response	Lower Cut-Off Frequency (-3 dB)	DC/1 Hz switchable																																																															
	Upper Cut-Off Frequency (-3 dB)	10 MHz																																																															
	Rise/Fall Time (10% - 90%)	35 ns																																																															
Input	Input Impedance	1 MΩ    15 pF																																																															
	Input Voltage Noise	4.7 nV/√Hz (@ 2 MHz)																																																															
	Intregated Input Noise	100 μV peak-peak																																																															
	Input Bias Current	2 pA																																																															
	Input Offset Voltage	250 μV max.																																																															
	Input Voltage Drift	2 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																																																															

# 10 MHz High Input Impedance Voltage Amplifier

Specifications (continued) Temperature Range	Storage Temperature Operating Temperature	- 40 ... + 100 °C 0 ... + 60 °C
Absolute Maximum Ratings	Power Supply Voltage Signal 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



Dimensions	<p style="text-align: center;">all measures in mm unless otherwise noted</p> <p style="text-align: right;">DZ_HVA-10M-60_R2</p>	
------------	---	--

FEMTO Messtechnik GmbH  
 Klosterstr. 64  
 10179 Berlin · Germany  
 Phone: +49 30 280 4711-0  
 Fax: +49 30 280 4711-11  
 Email: info@femto.de  
 www.femto.de

Specifications are subject to change without notice. Information provided 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 of third parties which may result from its use. No license is granted by implication or otherwise under any patent or 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