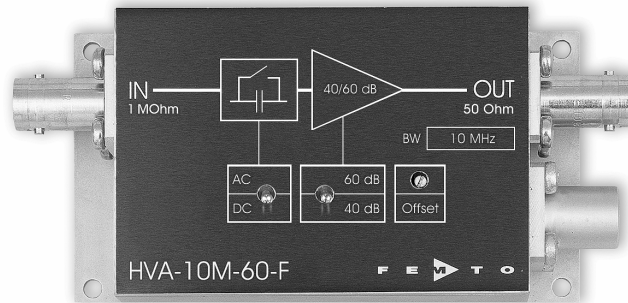




**Datasheet**

**HVA-10M-60-F**

**10 MHz High Input Impedance Voltage Amplifier**



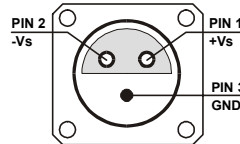
Features	<ul style="list-style-type: none"> <li>• <b>Switchable Gain 40/60 dB (x100 / x1,000)</b></li> <li>• <b>Bandwidth DC ... 10 MHz</b></li> <li>• <b>High Input Impedance 1 M<math>\Omega</math></b></li> <li>• <b>Switchable AC/DC Coupling</b></li> </ul>																																																															
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	<table border="0"> <tr> <td></td> <td><i>Test Conditions</i></td> <td><i>V<sub>s</sub> = <math>\pm</math> 15 V, T<sub>a</sub> = 25<math>^{\circ}</math>C</i></td> </tr> <tr> <td>Gain</td> <td>Gain</td> <td>40/60 dB switchable</td> </tr> <tr> <td></td> <td>Gain Accuracy</td> <td><math>\pm</math> 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 M<math>\Omega</math>    15 pF</td> </tr> <tr> <td></td> <td>Input Voltage Noise</td> <td>4.7 nV/<math>\sqrt</math>Hz (@ 2 MHz)</td> </tr> <tr> <td></td> <td>Integrated Input Noise</td> <td>100 <math>\mu</math>V 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 <math>\mu</math>V max.</td> </tr> <tr> <td></td> <td>Input Voltage Drift</td> <td>2 <math>\mu</math>V/<math>^{\circ}</math>C</td> </tr> <tr> <td>Output</td> <td>Output Impedance</td> <td>50 <math>\Omega</math> (terminate with 50 <math>\Omega</math> load for best performance)</td> </tr> <tr> <td></td> <td>Output Voltage</td> <td><math>\pm</math> 3.5 V (@ 50 <math>\Omega</math> 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><math>\pm</math> 500 mV</td> </tr> <tr> <td></td> <td>Slew Rate</td> <td>500 V/<math>\mu</math>s (@ 50 <math>\Omega</math> load)</td> </tr> <tr> <td>Power Supply</td> <td>Supply Voltage</td> <td><math>\pm</math> 15 V</td> </tr> <tr> <td></td> <td>Supply Current</td> <td><math>\pm</math> 70 mA typ. (depends on operating conditions, recommended power supply capability min. <math>\pm</math> 150 mA)</td> </tr> <tr> <td>Weight</td> <td colspan="2">200 g (0.5 lbs)</td> </tr> <tr> <td>Material</td> <td colspan="2">AlMg4.5Mn, nickel-plated</td> </tr> </table>		<i>Test Conditions</i>	<i>V<sub>s</sub> = <math>\pm</math> 15 V, T<sub>a</sub> = 25<math>^{\circ}</math>C</i>	Gain	Gain	40/60 dB switchable		Gain Accuracy	$\pm$ 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 M $\Omega$    15 pF		Input Voltage Noise	4.7 nV/ $\sqrt$ Hz (@ 2 MHz)		Integrated Input Noise	100 $\mu$ V peak-peak		Input Bias Current	2 pA		Input Offset Voltage	250 $\mu$ V max.		Input Voltage Drift	2 $\mu$ V/ $^{\circ}$ C	Output	Output Impedance	50 $\Omega$ (terminate with 50 $\Omega$ load for best performance)		Output Voltage	$\pm$ 3.5 V (@ 50 $\Omega$ load, for linear amplification)		Max. Output Current	100 mA		Output Offset Trimmer Range	$\pm$ 500 mV		Slew Rate	500 V/ $\mu$ s (@ 50 $\Omega$ load)	Power Supply	Supply Voltage	$\pm$ 15 V		Supply Current	$\pm$ 70 mA typ. (depends on operating conditions, recommended power supply capability min. $\pm$ 150 mA)	Weight	200 g (0.5 lbs)		Material	AlMg4.5Mn, nickel-plated	
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# Datasheet

# HVA-10M-60-F

## 10 MHz High Input Impedance Voltage Amplifier

Specifications (continued)	
Temperature Range	Storage Temperature      - 40 ... + 100 °C Operating Temperature    0 ... + 60 °C
Absolute Maximum Ratings	Power Supply Voltage      ± 20 V Signal Input Voltage       ± 5 V Transient Input Voltage    200 V (out of a 200 pF Source)
Connectors	Input                            BNC  Output                          BNC  Power Supply                  LEMO series 1S, 3-pin fixed socket Pin 1:                            + 15V Pin 2:                            - 15V Pin 3:                            GND

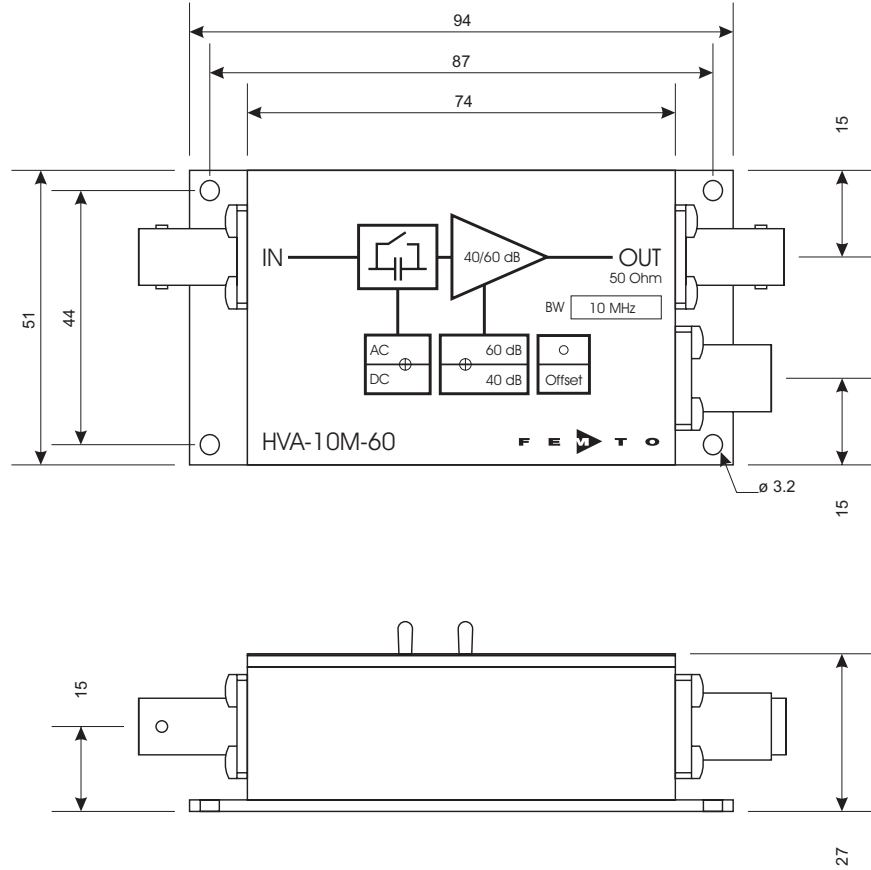


# Datasheet

# HVA-10M-60-F

## 10 MHz High Input Impedance Voltage Amplifier

Dimensions



all measures in mm unless otherwise noted

DZ\_HVA-10M-60\_R2

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SOPHISTICATED TOOLS FOR SIGNAL RECOVERY

