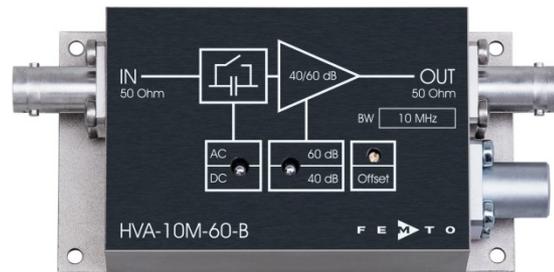



**Datasheet**
**HVA-10M-60-B**

## 10 MHz Low-Noise 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>Low Input Noise of 0.9 nV/<math>\sqrt{\text{Hz}}</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 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>	
Specifications	Test Conditions	$V_s = \pm 15 \text{ V}$ , $T_a = 25^\circ\text{C}$
Gain	Gain	40/60 dB switchable
	Gain Accuracy	$\pm 0.2 \text{ dB}$
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	$50 \Omega \parallel 12 \text{ pF}$
	Input Voltage Noise	0.9 nV/ $\sqrt{\text{Hz}}$ (@ 2 MHz, 60 dB gain) 1.8 nV/ $\sqrt{\text{Hz}}$ (@ 2 MHz, 40 dB gain)
	Integrated Input Noise	20 $\mu\text{V}$ peak-peak (@ 60 dB gain) 50 $\mu\text{V}$ peak-peak (@ 40 dB gain)
	Input Bias Current	18 $\mu\text{A}$
	Input Offset Voltage	500 $\mu\text{V}$ typ.
	Input Voltage Drift	1 $\mu\text{V}/^\circ\text{C}$
Output	Output Impedance	$50 \Omega$ (terminate with $50 \Omega$ load for best performance)
	Output Voltage	$\pm 3.5 \text{ V}$ (@ $50 \Omega$ load, for linear amplification)
	Max. Output Current	100 mA
	Output Offset Trimmer Range	$\pm 500 \text{ mV}$
	Slew Rate	500 V/ $\mu\text{s}$ (@ $50 \Omega$ load)
Power Supply	Supply Voltage	$\pm 15 \text{ V}$
	Supply Current	$\pm 70 \text{ mA}$ typ. (depends on operating conditions, recommended power supply capability min. $\pm 150 \text{ mA}$ )
Case	Weight	200 g (0.5 lbs)
	Material	AlMg4.5Mn, nickel-plated

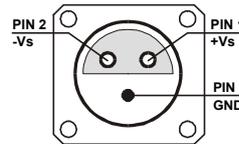


**Datasheet**

**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



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>
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