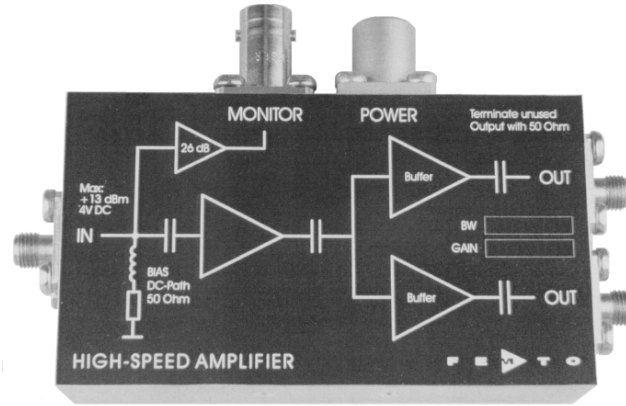




Datasheet

HSA-Y-1-40

1 GHz High-Speed Amplifier



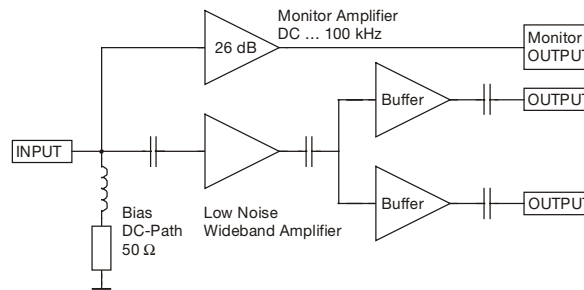
Features

- **Bandwidth 10 kHz ... 1 GHz**
- **Rise Time 330 ps**
- **Gain 40 dB (5 kV/A)**
- **Noise Figure 1.9 dB**
- **Integrated Bias Circuit**
- **Monitor Output**
- **Two identical Signal Outputs**

Applications

- **Preamplifier for ultra-fast Detectors (Microchannel-Plates, Photomultipliers, Avalanche-Photodiodes, PIN-Photodiodes etc.)**
- **Oscilloscope and Transient-Recorder Preamplifier**
- **Time-Resolved Pulse and Transient Measurements**

Block Diagram



Specifications

Test Conditions Vs = ± 15 V, Ta = 25°C, System Impedance = 50 Ω

Gain

Gain 40 dB (5 kV/A)
 Gain Accuracy ± 1 dB
 Gain Flatness ± 0.1 dB

Frequency Response

Lower Cut-Off Frequency 10 kHz
 Upper Cut-Off Frequency 1 GHz

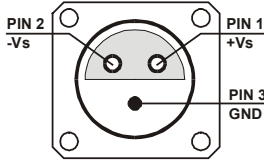
Time Response

Rise / Fall Time (10% - 90%) 330 ps

Input

DC Input Impedance 50 Ω
 RF Input Impedance 50 Ω
 50 Ω Noise Figure 1.9 dB (@ f < 700 MHz)
 Equivalent Input Voltage Noise 330 pV/√Hz (@ f < 700 MHz)
 Equivalent Input Current Noise 66 pA/√Hz (@ f < 700 MHz)
 Input VSWR 1 : 1.45 (@ f < 1.5 GHz)
 Maximum Input VSWR 1 : 1.45 (@ f < 3 GHz)

Datasheet**HSA-Y-1-40****1 GHz High-Speed Amplifier**

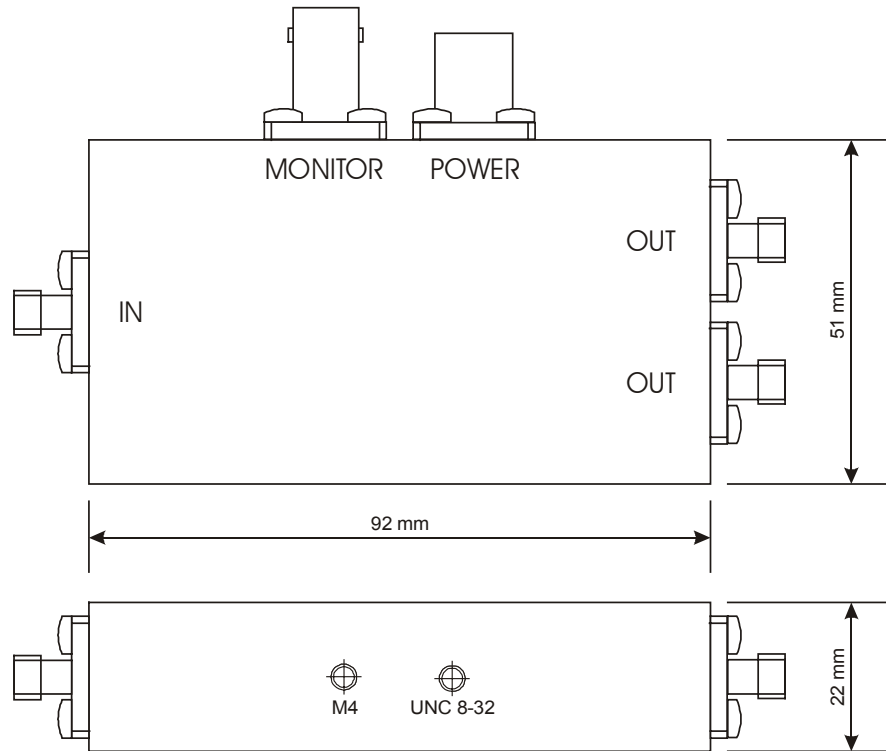
Output	Two identical Signal Outputs: Output Impedance 50 Ω Maximum Output VSWR 1 : 1.6 (@ f < 3 GHz) Output Power P _{1dB} + 11.5 dBm (@ f < 500 MHz) Output Peak-Peak Voltage 2 V _{pp} (@ f < 500 MHz, for linear Amplification) Isolation between Outputs 20 dB (@ f < 3 GHz)
Monitor Amplifier	Gain 26 dB (1 kV/A) Lower Cut-Off Frequency DC Upper Cut-Off Frequency 100 kHz Output Voltage ± 10 V (@ 10k Ω load)
Power Supply	Supply Voltage ± 15 V Supply Current + 200 / -10 mA
Case	Weight 180 gr. (0.41 lbs) Material AlMg4.5Mn, nickel-plated
Temperature Range	Storage Temperature - 40 ... + 100 °C Operating Ambient Temperature 0 ... + 60 °C Operating Case Temperature 40 °C (@ T _a = 25 °C)
Absolute Maximum Ratings	Power Supply Voltage ± 20 V DC and LF Input Voltage ± 4 V RF Input Power + 13 dBm
Connectors	Input SMA Signal Outputs SMA Monitor Output BNC Power Supply LEMO Series 1S, 3-pin fixed Socket Pin 1: + 15 V Pin 2: - 15 V Pin 3: GND 

Datasheet

HSA-Y-1-40

1 GHz High-Speed Amplifier

Dimensions



DZ01-0611-10

FEMTO Messtechnik GmbH
 Paul-Lincke-Ufer 34
 D-10999 Berlin · Germany
 Tel.: +49 (0)30 – 4 46 93 86
 Fax: +49 (0)30 – 4 46 93 88
 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

