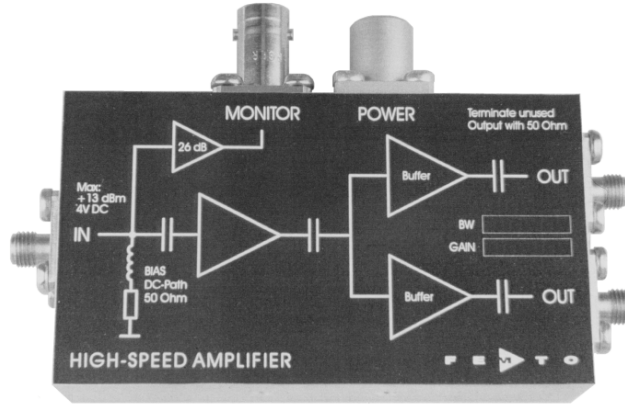


Datasheet

HSA-Y-1-60

1 GHz High-Speed Amplifier



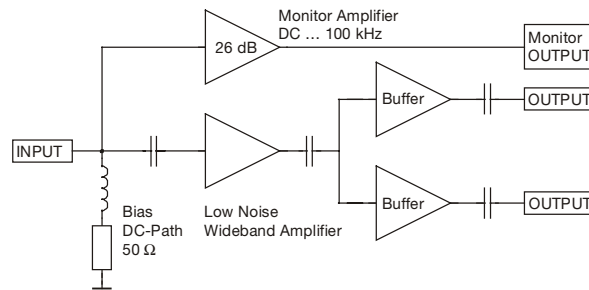
Features

- **Bandwidth 10 kHz ... 1.1 GHz**
- **Rise Time 320 ps**
- **Gain 60 dB (50 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 60 dB (50 kV/A)
 Gain Accuracy ± 1 dB
 Gain Flatness ± 0.2 dB

Frequency Response

Lower Cut-Off Frequency 10 kHz
 Upper Cut-Off Frequency 1.1 GHz

Time Response

Rise / Fall Time (10% - 90%) 320 ps

Input

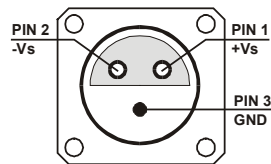
DC Input Impedance 50 Ω
 RF Input Impedance 50 Ω
 50 Ω Noise Figure 1.9 dB (@ f < 700 MHz)
 Equivalent Input Voltage Noise 330 pV/√Hz (@ f < 700 MHz)
 Equivalent Input Current Noise 26 pA/√Hz (@ f < 700 MHz)
 Input VSWR 1 : 1.4 (@ f < 1.5 GHz)
 Maximum Input VSWR 1 : 1.4 (@ f < 3 GHz)

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Output	Two identical Signal Outputs: Output Impedance 50 Ω Maximum Output VSWR 1 : 1.4 (@ f < 3 GHz) Output Power P _{1dB} + 13 dBm (@ f < 500 MHz) Output Peak-Peak Voltage 2.3 Vpp (@ f < 500 MHz, for linear Amplification) Isolation between Outputs 16 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 (@ 10kΩ load)
Power Supply	Supply Voltage ± 15 V Supply Current + 180 / -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 39 °C (@ Ta = 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

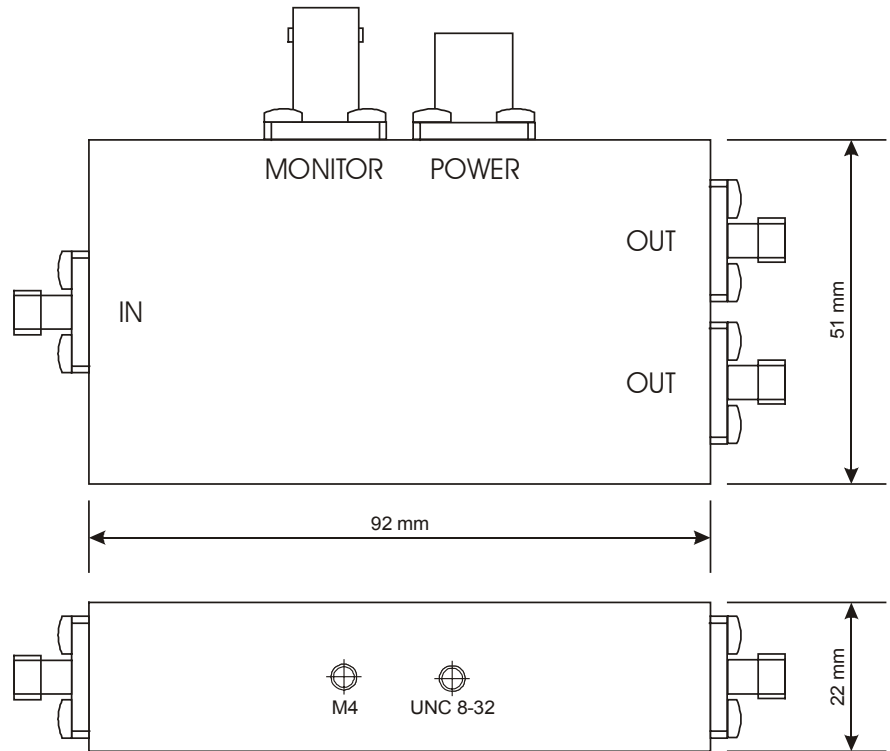


Datasheet

HSA-Y-1-60

1 GHz High-Speed Amplifier

Dimensions



DZ01-0611-10

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SOPHISTICATED TOOLS FOR SIGNAL RECOVERY

