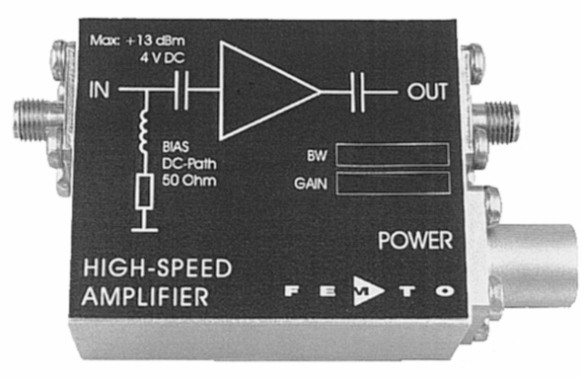
2 GHz High-Speed Amplifier



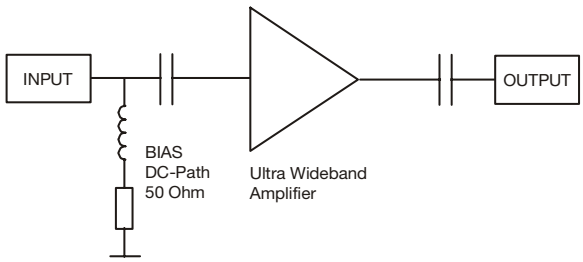
Features

- **Bandwidth 10 kHz ... 2 GHz**
- **Rise Time 180 ps**
- **Gain 40 dB**
- **Input VSWR 1 : 1.1**
- **Integrated Bias Circuit**

Applications

- **Preamplifier for ultra-fast Detectors (Microchannel-Plates, Photomultipliers, Avalanche-Photodiodes and PIN-Photodiodes)**
- **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	
	Gain Accuracy	± 1 dB	
	Gain Flatness (overall)	± 0.3 dB	
Frequency Response	Lower Cut-Off Frequency	10 kHz	
	Upper Cut-Off Frequency	2 GHz	
Time Response	Rise / Fall Time (10% - 90%)	180 ps	
Input	DC Input Impedance	50 Ω	
	RF Input Impedance	50 Ω	
	50 Ω Noise Figure	5.1 dB	(@ f < 1 GHz)
	Equivalent Input Voltage Noise	670 pV/√Hz	(@ f < 1 GHz)
	Input VSWR	1 : 1.1	(@ f < 1 GHz)
	Maximum Input VSWR	1 : 1.3	(@ f < 3 GHz)
Output	Output Impedance	50 Ω	
	Output Power P_{1dB}	+ 10.5 dBm	(@ f < 1 GHz)
	Output Peak-Peak Voltage	1.9 Vpp	(@ f < 500 MHz, for linear Amplification)

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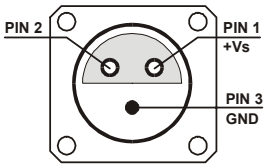
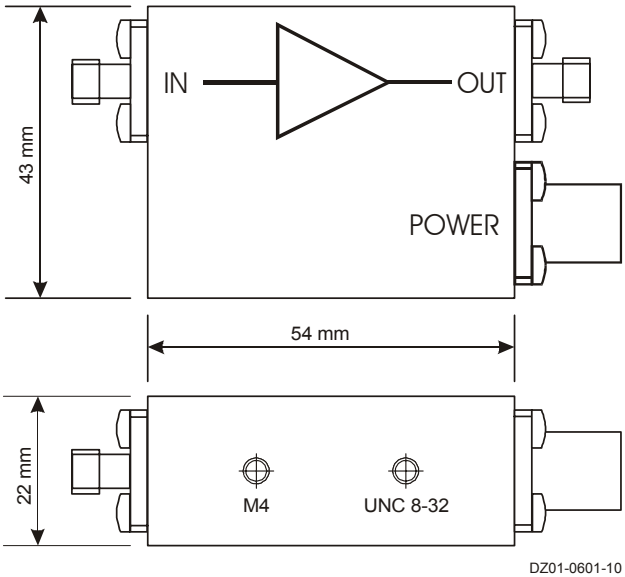
Power Supply	Supply Voltage	+ 15 V
	Supply Current	+ 125 mA
Case	Weight	100 gr. (0.23 lbs)
	Material	AlMg4.5Mn, nickel-plated
Temperature Range	Storage Temperature	- 40 ... + 100 °C
	Operating Ambient Temperature	0 ... + 60 °C
	Operating Case Temperature	40 °C
Absolute Maximum Ratings	Power Supply Voltage	+ 20 V
	DC and LF Input Voltage	± 4 V
	RF Input Power	+ 13 dBm
Connectors	Input	SMA
	Output	SMA
	Power Supply	LEMO Series 1S, 3-pin fixed Socket Pin 1: + 15 V Pin 2: n.c. Pin 3: GND



Dimensions



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