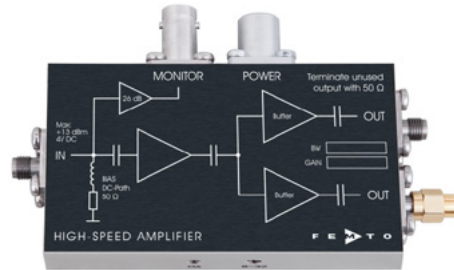


Datasheet

HSA-Y-1-40

1 GHz High-Speed Amplifier



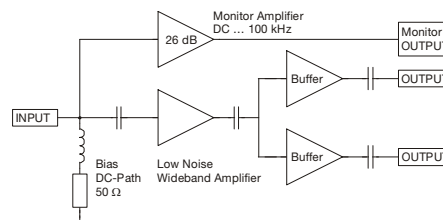
Features

- 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	$V_s = \pm 15\text{ V}$, $T_a = 25^\circ\text{C}$, System Impedance = $50\ \Omega$
Gain	Gain	40 dB (5 kV/A)
	Gain Accuracy	$\pm 1\text{ dB}$
	Gain Flatness	$\pm 0.1\text{ dB}$
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	$50\ \Omega$
	RF Input Impedance	$50\ \Omega$
	$50\ \Omega$ Noise Figure	1.9 dB (@ $f < 700\text{ MHz}$)
	Equivalent Input Voltage Noise	330 pV/ $\sqrt{\text{Hz}}$ (@ $f < 700\text{ MHz}$)
	Equivalent Input Current Noise	6.6 pA/ $\sqrt{\text{Hz}}$ (@ $f < 700\text{ MHz}$)
	Input VSWR	1 : 1.45 (@ $f < 1.5\text{ GHz}$)
	Maximum Input VSWR	1 : 1.45 (@ $f < 3\text{ GHz}$)

SOPHISTICATED TOOLS FOR SIGNAL RECOVERY

F E M T O

DE-HSA-Y-1-40_R3/JM/18MAR2019

Datasheet

HSA-Y-1-40

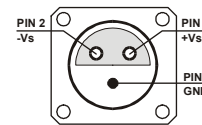
1 GHz High-Speed Amplifier

Specifications (continued)

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 (@ 10 k 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
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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
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SOPHISTICATED TOOLS FOR SIGNAL RECOVERY

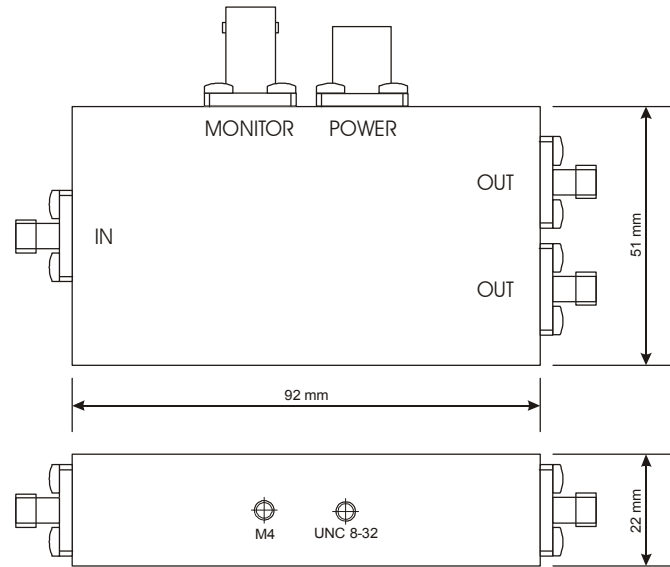


Datasheet

HSA-Y-1-40

1 GHz High-Speed Amplifier

Dimensions



DZ01-0611-10

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SOPHISTICATED TOOLS FOR SIGNAL RECOVERY

