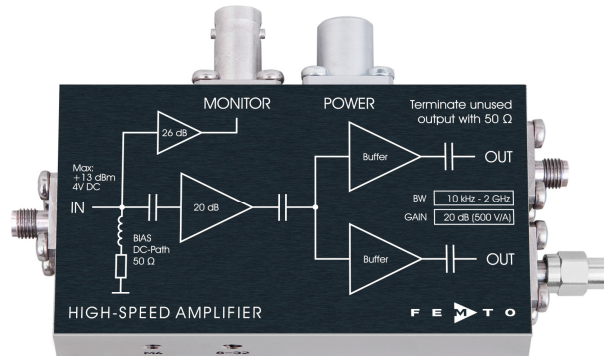



1 GHz High-Speed Amplifier

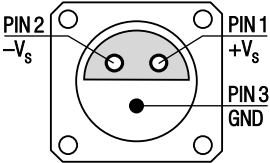


<p>Features</p>	<ul style="list-style-type: none"> • Bandwidth 10 kHz – 2 GHz • Exceptional low 10 kHz lower cut-off frequency for optimal pulse processing without shape distortion • Rise time 175 ps • Gain 20 dB • Input return loss 23.1 dB • Integrated bias circuit • Monitor output • Two identical signal outputs
<p>Applications</p>	<ul style="list-style-type: none"> • Preamplifier for ultra-fast detectors (microchannel-plates, photomultipliers, avalanche-photodiodes, PIN-photodiodes etc.) • Oscilloscope and transient-recorder preamplifier • Time-resolved pulse and transient measurements
<p>Block Diagram</p>	<p style="text-align: right;">BS-HSA-Y_23_R01</p>
<p>Intended Use</p>	<p>The HSA-Y-2-20 amplifier is a fixed gain wideband GHz amplifier. It is designed for ultra fast amplification of small voltage and current signals in the frequency range from 10 kHz to 2 GHz. Operation is mostly self-explanatory. If in doubt, consult this document or contact support@femto.de.</p> <p>For safe operation, please refer to the damage thresholds specified in the "Absolute Maximum Ratings", "Temperature Range" and "Power Supply" sections of this document.</p>
<p>Application Notes</p>	<p>CAUTION! Do not exceed the maximum allowable input power of +13 dBm (20 mW). If in doubt, use attenuators on the amplifier input.</p> <p>The HSA-Y-2-20 offers two identical RF outputs. For operation it is mandatory that both RF outputs are terminated with 50 Ω loads. If only one output is used, the unused SMA output socket must be terminated with a 50 Ω terminator which is included in delivery.</p>

1 GHz High-Speed Amplifier

Available Accessories	PS-15-25-L 	Power supply Input: AC 100 – 240 V Output: DC ±15 V																																																																																																
Related Models	HSA-Y-1-40 HSA-Y-1-60 HSA-Y-2-40	Gain 40 dB, 10 kHz – 1 GHz, noise figure 1.9 dB Gain 60 dB, 10 kHz – 1.1 GHz, noise figure 1.9 dB Gain 40 dB, 10 kHz – 1.9 GHz, noise figure 4.9 dB																																																																																																
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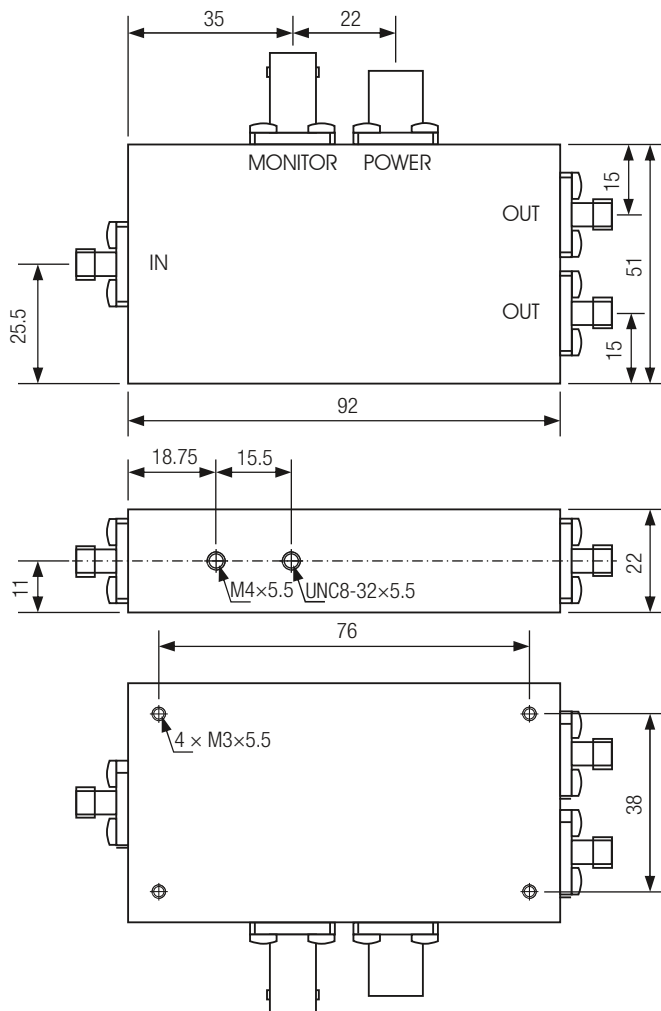
1 GHz High-Speed Amplifier

Connectors	Input RF Output Monitor output Power supply	SMA jack (female) 2 × SMA jack (female) BNC jack (female) LEMO® series 1S, 3-pin fixed socket (mating plug type: FFA.1S.303.CLAC52)  Pin 1: +15 V Pin 2: -15 V Pin 3: GND
Scope of Delivery	HSA-Y-2-20, 50 Ω SMA terminator, LEMO® 3-pin connector, datasheet, transport package	
Ordering Information	HSA-Y-2-20	High-speed GHz amplifier

1 GHz High-Speed Amplifier

Dimensions

HSA-Y-2-20



DZ-HSA-Y_23_R01

all dimensions in mm unless otherwise noted

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