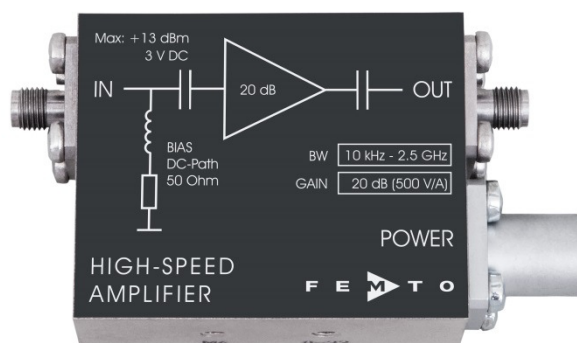


2.5 GHz High-Speed Amplifier



<p>Features</p>	<ul style="list-style-type: none"> • Bandwidth 10 kHz ... 2.5 GHz • Rise time 140 ps • Gain 20 dB • Input VWSR 1.25 : 1 • Integrated bias circuit 		
<p>Applications</p>	<ul style="list-style-type: none"> • Preamplifier for ultra-fast detectors (microchannel-plates, photomultipliers, avalanche-photodiodes and PIN-photodiodes) • Oscilloscope and transient-recorder preamplifier • Time-resolved pulse and transient measurements 		
<p>Block Diagram</p>			
<p>Specifications</p>	<p>Test conditions</p> <p>Gain</p> <p>Frequency Response</p> <p>Input</p> <p>Output</p>	<p>$V_s = +15\text{ V}$, $T_A = 25^\circ\text{C}$, system impedance = $50\ \Omega$</p> <p>Gain</p> <p>Gain accuracy</p> <p>Lower cut-off frequency (-3 dB)</p> <p>Upper cut-off frequency (-3 dB)</p> <p>Rise/fall time (10% - 90%)</p> <p>DC input impedance</p> <p>RF input impedance</p> <p>$50\ \Omega$ noise figure</p> <p>Equivalent input voltage noise</p> <p>Input VSWR</p> <p>Input return loss</p> <p>Output impedance</p> <p>Output power $P_{1\text{dB}}$</p> <p>Output peak-to-peak voltage</p>	<p>20 dB</p> <p>$\pm 1\text{ dB}$</p> <p>10 kHz ($\pm 20\%$)</p> <p>2.5 GHz ($\pm 15\%$)</p> <p>140 ps</p> <p>$50\ \Omega$</p> <p>$50\ \Omega$</p> <p>4.9 dB (@ $f < 1\text{ GHz}$)</p> <p>650 pV/$\sqrt{\text{Hz}}$ (@ $f < 1\text{ GHz}$)</p> <p>1.25 : 1 (@ $f < 2.5\text{ GHz}$)</p> <p>20 dB (@ $f < 2.5\text{ GHz}$)</p> <p>$50\ \Omega$</p> <p>+13.5 dBm (@ $f < 1\text{ GHz}$)</p> <p>2.0 V_{pp} (@ $f < 500\text{ MHz}$, for linear amplification)</p>

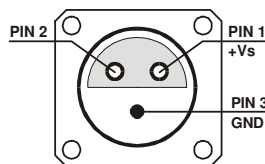
2.5 GHz High-Speed Amplifier

Specifications (continued)

Power Supply	Supply voltage	+15 V
	Supply current	+140 mA
Case	Weight	100 g (0.23 lbs)
	Material	AlMg4.5Mn, nickel-plated
Temperature Range	Storage temperature	-40 ... +100 °C
	Operating ambient temperature	0 ... +60 °C

Absolute Maximum Ratings	Power supply voltage	+18.5 V
	DC and LF input voltage	±3 V
	RF input power	+13 dBm

Connectors	Input	SMA, jack (female)
	Output	SMA, jack (female)
	Power supply	Lemo® series 1S, 3-pin fixed socket (mating plug type: FFA.1S.303.CLAC52) Pin 1: +15 V Pin 2: NC Pin 3: GND



Dimensions	<p style="text-align: right;">DZ01-0601-10</p>
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