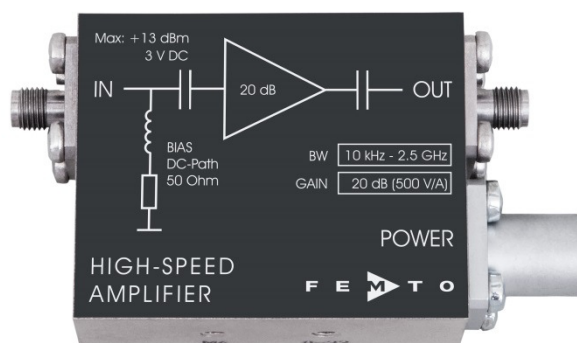


## 2.5 GHz High-Speed Amplifier



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

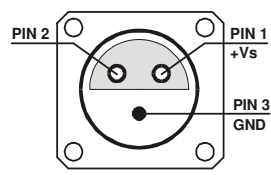
## 2.5 GHz High-Speed Amplifier

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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