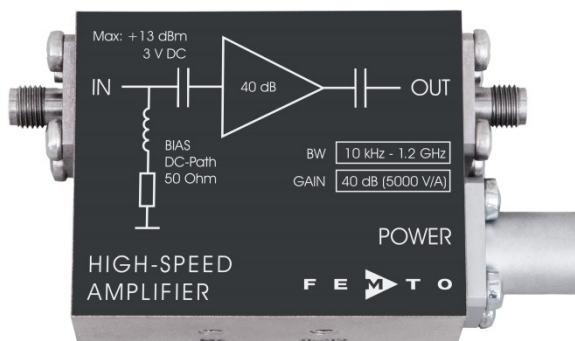
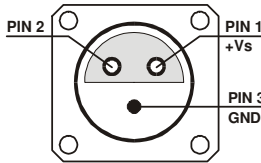
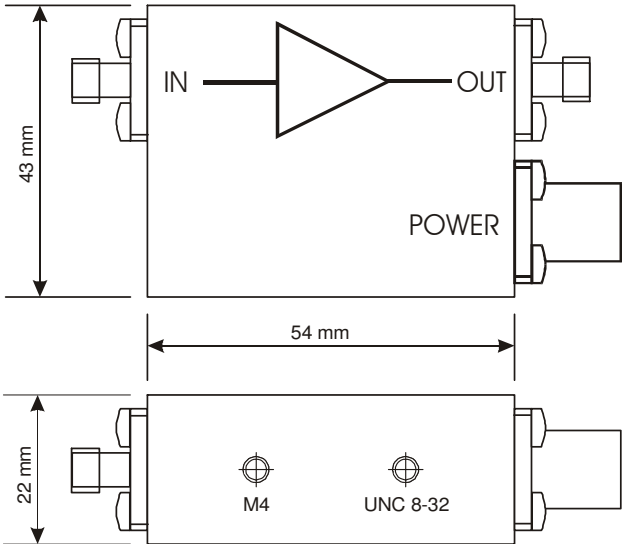


1.2 GHz High-Speed Amplifier



<p>Features</p>	<ul style="list-style-type: none"> • Bandwidth 10 kHz ... 1.2 GHz • Rise time 290 ps • Gain 40 dB • Noise figure 1.9 dB • 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 																																																			
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<p>Specifications</p>	<table border="0"> <tr> <td>Test conditions</td> <td colspan="3">$V_s = +15\text{ V}$, $T_A = 25^\circ\text{C}$, system impedance = 50 Ω</td> </tr> <tr> <td>Gain</td> <td>Gain</td> <td colspan="2">40 dB</td> </tr> <tr> <td></td> <td>Gain accuracy</td> <td colspan="2">$\pm 1\text{ dB}$</td> </tr> <tr> <td rowspan="3">Frequency Response</td> <td>Lower cut-off frequency (-3 dB)</td> <td>10 kHz</td> <td>($\pm 20\%$)</td> </tr> <tr> <td>Upper cut-off frequency (-3 dB)</td> <td>1.2 GHz</td> <td>($\pm 15\%$)</td> </tr> <tr> <td>Rise/fall time (10% - 90%)</td> <td colspan="2">290 ps</td> </tr> <tr> <td rowspan="6">Input</td> <td>DC input impedance</td> <td colspan="2">50 Ω</td> </tr> <tr> <td>RF input impedance</td> <td colspan="2">50 Ω</td> </tr> <tr> <td>50 Ω noise figure</td> <td>1.9 dB</td> <td>(@ $f < 700\text{ MHz}$)</td> </tr> <tr> <td>Equivalent input voltage noise</td> <td>330 pV/$\sqrt{\text{Hz}}$</td> <td>(@ $f < 700\text{ MHz}$)</td> </tr> <tr> <td>Input VSWR</td> <td>1.6 : 1</td> <td>(@ $f < 2\text{ GHz}$)</td> </tr> <tr> <td>Input return loss</td> <td>13 dB</td> <td>(@ $f < 2\text{ GHz}$)</td> </tr> <tr> <td rowspan="3">Output</td> <td>Output impedance</td> <td colspan="2">50 Ω</td> </tr> <tr> <td>Output power $P_{1\text{dB}}$</td> <td>+12.5 dBm</td> <td>(@ $f < 500\text{ MHz}$)</td> </tr> <tr> <td>Output peak-to-peak voltage</td> <td>2.0 V_{pp}</td> <td>(@ $f < 500\text{ MHz}$, for linear amplification)</td> </tr> </table>	Test conditions	$V_s = +15\text{ V}$, $T_A = 25^\circ\text{C}$, system impedance = 50 Ω			Gain	Gain	40 dB			Gain accuracy	$\pm 1\text{ dB}$		Frequency Response	Lower cut-off frequency (-3 dB)	10 kHz	($\pm 20\%$)	Upper cut-off frequency (-3 dB)	1.2 GHz	($\pm 15\%$)	Rise/fall time (10% - 90%)	290 ps		Input	DC input impedance	50 Ω		RF input impedance	50 Ω		50 Ω noise figure	1.9 dB	(@ $f < 700\text{ MHz}$)	Equivalent input voltage noise	330 pV/ $\sqrt{\text{Hz}}$	(@ $f < 700\text{ MHz}$)	Input VSWR	1.6 : 1	(@ $f < 2\text{ GHz}$)	Input return loss	13 dB	(@ $f < 2\text{ GHz}$)	Output	Output impedance	50 Ω		Output power $P_{1\text{dB}}$	+12.5 dBm	(@ $f < 500\text{ MHz}$)	Output peak-to-peak voltage	2.0 V_{pp}	(@ $f < 500\text{ MHz}$, for linear amplification)
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1.2 GHz High-Speed Amplifier

Specifications (continued)	<table border="0"> <tr> <td>Power Supply</td> <td>Supply voltage</td> <td>+15 V</td> </tr> <tr> <td></td> <td>Supply current</td> <td>+140 mA</td> </tr> <tr> <td>Case</td> <td>Weight</td> <td>100 g (0.23 lbs)</td> </tr> <tr> <td></td> <td>Material</td> <td>AlMg4.5Mn, nickel-plated</td> </tr> <tr> <td>Temperature Range</td> <td>Storage temperature</td> <td>-40 ... +100 °C</td> </tr> <tr> <td></td> <td>Operating ambient temperature</td> <td>0 ... +60 °C</td> </tr> </table>	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
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Dimensions	 <p style="text-align: right; font-size: small;">DZ01-0601-10</p>																		

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