

- DC to 800 MHz bandwidths
- Rise times as low as 700 ps
- DC-coupled

- Gain as high as 20 dB
- Peak output amplitude to 5 Volts
- Connectorized modules

The AV-141 series of DC-coupled pulse amplifiers is intended for amplifying nanosecond pulses with bandwidths up to 800 MHz.

Model AV-141C1 offers 20 dB gain ( $\times 10$ ) and can generate  $\pm 3$  Volts into  $50 \Omega$ , with 800 ps rise time and DC-800 MHz bandwidth.

Model AV-141G provide up to  $\pm 5$ V to  $50 \Omega$  loads (or  $\pm 10$ V into high impedance loads), with DC - 20 MHz bandwidth and +10 dB of gain ( $\times 3.2$ ). The input resistance is  $10 \text{ k}\Omega$  or higher.

The unity gain buffer amplifier Model AV-141J offers

$\geq 1 \text{ M}\Omega$  input resistance, and can generate  $\pm 10$ V into  $50 \Omega$  loads with 10 ns rise times.

Models without the -PS suffix require  $\pm 15$ V or  $\pm 24$ V prime power, and come in a miniature module format.

Models with the -PS suffix come in a larger bench-top instrument format, and operate from 100-240V, 50-60 Hz prime power.

See the AV-143 series of linear amplifiers or the AV-144 series of non-linear amplifiers for output amplitudes up to 100V. Contact Avtech for your special requirements ([info@avtechpulse.com](mailto:info@avtechpulse.com)).

Model:	AV-141C1 AV-141C1-PS	AV-141G AV-141G-PS	AV-141J AV-141J-PS
Bandwidth:	DC - 800 MHz	DC - 20 MHz	DC - 50 MHz
Gain: in dB:	20 dB	10 dB	0 dB
voltage gain (V/V):	+10	+3.2	+1
Rise/fall time <sup>1</sup> :	800 ps	15 ns	10 ns
Input resistance:	$50 \Omega$	$\geq 10 \text{ k}\Omega$	$\geq 1 \text{ M}\Omega$
Peak output: (to $50 \Omega$ )	$\pm 3 \text{ V}$	$\pm 5 \text{ V}$	$\pm 10 \text{ V}$
Output resistance:	$< 3 \Omega$	$50 \Omega$	$< 3 \Omega$
Min. input pulse width:	1.5 ns	30 ns	20 ns
Max. input pulse width:	No limit.		
Equivalent input noise:	4 nV / $\sqrt{\text{Hz}}$		6 nV / $\sqrt{\text{Hz}}$
Connectors:	SMA		
Prime power: -PS:	100 - 240 Volts, 50 - 60 Hz		
Modules:	$\pm 15$ V, 100 mA	$\pm 24$ V, 200mA	
Dimensions: -PS:	100 mm x 215 mm x 375 mm (3.9" x 8.5" x 14.8")		
Modules:	1.4" x 1.1" x 2.3"		

1) Measured for a pulse from 0V to maximum positive voltage output, between the 20% and 80% amplitude points.

2) Gain into an open circuit. The gain falls slightly to 0.9 (or -1 dB) when operating into a  $50 \Omega$  load, due to the  $50 \Omega$  output resistance.



DC-Powered  
Module



AC-powered  
"-PS" instrument