

AV-143 SERIES

DC-COUPLED LINEAR AMPLIFIERS AND BOOSTER AMPLIFIERS

- 5, 10, 20 and 30 Volt models
- For pulse and CW applications
- Voltage gains of 2.5, 5 and 10 and bandwidths to 50 MHz

Model:	AV-143A AV-143A1	AV-143B AV-143B1	AV-143CP AV-143CN
Output amplitude: (max) ($R_L = 50 \Omega$)	$\pm 10V$ (A) $\pm 5V$ (A1)	$\pm 20V$ (B) $\pm 10V$ (B1)	+ 30V (P) - 30V (N)
Voltage gain:	+2.5 (A) +1.25 (A1)	+5.0 (B) +2.5 (B1)	+7.5 (P) -7.5 (N)
Rise, fall time: (20%-80%) ³	≤ 10 ns	≤ 50 ns	≤ 60 ns
Input impedance ¹ :	1 k Ω		
Output impedance:	2 Ω (A) 50 Ω (A1)	2 Ω (B) 50 Ω (B1)	2 Ω
Bandwidth:	DC-50 MHz	DC-10 MHz	DC-10 MHz
Power out: (max)	1 Watt	8 Watts	4 Watts
Overshoot:	$\leq 3\%$	$\leq 6\%$	$\leq 10\%$
Prime power ² :	$\pm 24V$, 0.4A	$\pm 24V$, 0.6A	-P : +36V, 0.8A, and -15V, 0.2A -N: -36V, 0.8A, and +15V, 0.2A
Connectors:	BNC		
Dimensions ² :	Avtech Style A 43 mm x 66 mm x 109 mm (1.7" x 2.6" x 4.3")		

- 1) Other input impedances are available. Call Avtech for details.
- 2) For a line-powered unit (120/240 Volts, 50 - 60 Hz) mounted in a 100 x 215 x 375 mm (3.9" x 8.5" x 14.8") chassis, add the suffix -PS to the model number.
- 3) For an output pulse swinging from zero Volts to the maximum positive output voltage.

The amplifiers in the AV-143 family were designed to serve as booster amplifiers for arbitrary function generators and TTL-level pulse generators. Models AV-143A and AV-143B are linear non-inverting DC-coupled bipolar amplifiers providing peak outputs of ± 10 and ± 20 Volts, with rise times of 10 and 50 ns and voltage gains of 2.5 and 5.0. Models AV-143A and AV-143B have an output impedance of 2 Ohms while the A1 and B1 versions have an output impedance of 50 Ohms. Model AV-143CP provides an output of 0 to + 30 Volts with a gain of +7.5 (non-inverting), while Model AV-143CN provides an output of 0 to -30 Volts with a gain of -7.5 (inverting). Both have an output impedance of 2 Ω . See the AV-144 series below for applications requiring amplification of a TTL input. Call Avtech for your special amplifier applications.

These models can also be supplied in a AC line-powered (100 - 240V, 50 - 60 Hz) bench-top format by adding the suffix "-PS" to the model number. Models with the "-PS" suffix do not require DC power supplies.

AV-144 SERIES

DC-COUPLED NON-LINEAR PULSE AMPLIFIERS-DRIVERS

- TTL in, 10, 20 or 30 Volts out
- Rise times as low as 4 ns
- DC-coupled

Model:	AV-144A3-PS AV-144A2-PS	AV-144B1-PS AV-144B2-PS	AV-144C1-PS AV-144C2-PS
Output amplitude: ($R_L = 50 \Omega$)	+10V	+20V	+30V
Input amplitude:	TTL (+3 to +5 Volts)		
Rise, fall time: (20%-80%)	≤ 4 ns (A3) ≤ 10 ns (A2)	≤ 2.5 ns (B1) ≤ 20 ns (B2)	≤ 10 ns (C1) ≤ 50 ns (C2)
Input impedance ¹ :	≥ 1 k Ω		
Output impedance:	10 Ohms (A3, B1, C1) 2 Ohms (A2, B2, C2)		
Overshoot:	$\leq 5\%$		
Prime power:	100 - 240V, 50 - 60 Hz		
Connectors:	SMA		
Dimensions:	100 x 215 x 375 mm (3.9" x 8.5" x 14.8")		

- 1) Other input impedances are available. Call Avtech for details.

The AV-144 series accepts a TTL level input and provides a fixed level output. +10 Volt, +20 Volt and +30 Volt models are available. Other output levels are available on special order. This series features exceptionally low rise and fall times, DC-coupled performance and low cost. Units with a "1" or "3" suffix feature extremely fast rise and fall times and require a 50 Ohm load while companion models with a "2" suffix provide longer rise and fall times and will operate into poorly defined loads. Model AV-144A3-PS provides an output voltage of +10 Volts with a rise time of 4 ns while Models AV-144B1-PS and AV-144C1-PS provide outputs of +20 and +30 Volts with rise times of 2.5 and 10 ns, respectively. Companion models with the "2" suffix are similar but with longer rise and fall times.

These models are supplied in a line-powered (100 - 240 V, 50 - 60 Hz) bench-top format.

The models can also be supplied in a DC-powered module format, if required. Contact Avtech with your special requirement!