

- 200 psec rise times
- Amplitudes to 100 volts
- PRF to 20 KHz
- Pulse widths variable from 1.0 to 100 nsec
- Stand alone lab instruments or miniature modules

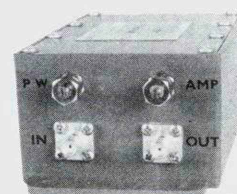
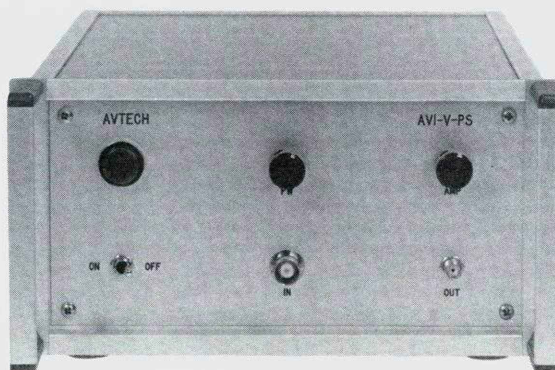
The AVI series provides high amplitude (as high as 100 volts) flat topped pulse outputs with rise times as low as 200 psec and fall times of 2 nsec. Units with maximum pulse repetition frequencies of 20 KHz and 5 KHz feature output pulse widths variable over the range of 0 to 100 nsec by means of a one turn control. Models AVI-V-C and AVI-HV1-C provide output amplitudes variable from 0 to 50 volts with rise times of 350 psec and 250 psec respectively. Models AVI-HV2-C and AVI-HV3-C provide peak amplitudes of 100 volts and rise times of 500 psec and 200 psec.

The pulse repetition frequency is variable from 50 Hz to 20 KHz (to 5 KHz for -HV2-C and -HV3-C units) using the internal clock oscillator which is controlled by a front panel one turn control. A delay control and sync output is provided for sampling scope triggering purposes. The units can also be triggered externally using a TTL level pulse. The propagation delay in the externally triggered mode is typically 250 nsec. Either output polarity or an optional dual output polarity can be provided. Polarity inversion in dual polarity units is accomplished by means of a built-in inverting transformer and a coaxial jumper cable which connects the transformer to the uninverted output port. A DC offset or

bias insertion option is available. Units with this option include a circuit similar to Model AVX-T (see page 64) at the output. The required DC offset or bias is applied directly to rear panel solder terminals. Some AVI units are also available with a monitor output option which provides an attenuated (20 db or X10) coincident replica of the main output pulse. Models with the -C suffix require 120/240V (switchable) 50-60 Hz prime power.

All AVI units are also available in a line powered chassis without the internal clock (-PS suffix) and in DC powered (+15V) miniature module form. The modules and -PS units require a low level slow speed input TTL trigger signal and the output PRF equals the input trigger PRF. Module units AVI and AVI-MP offer PRF up to 1.0 MHz with pulse width control via an external delay line.

The AVI series is ideally suited for systems or laboratory applications such as logic family propagation testing, TDR, radar, optical and cable communications, SAW, nuclear, switching and propagation time studies and educational fields. In some cases, the specifications can be adapted to satisfy a particular requirement. Contact the factory for your special requirement.



SPECIFICATIONS

AVI SERIES

Model:	AVI-V-C ¹ AVI-V-PS AVI-V	AVI-V-HV1-C ¹ AVI-V-HV1-PS AVI-V-HV1	AVI-V-HV2-C ¹ AVI-V-HV2-PS AVI-V-HV2	AVI-V-HV3-C ¹ AVI-V-HV3-PS AVI-V-HV3	AVI	AVI-MP
Amplitude: (50 ohm load)	0 to 50 volts		0 to 100 volts		0 to 40 volts	≥ 40 volts
Rise time:	≤ 350 psec	≤ 250 psec	≤ 500 psec	≤ 200 psec	≤ 350 psec	≤ 350 psec
Fall time:	≤ 2 nsec					
Pulse width:	2 to 100 nsec					
PRF:	0 to 20 KHz		0 to 5 KHz		0 to 1.0 MHz (2 nsec PW) 0 to 20 KHz (100 nsec PW)	
Polarity ² :	Positive or negative or both (specify)					Positive or negative (-PN not available)
Propagation delay: (EXT TRIG IN to Pulse OUT)	≤ 250 nsec			≤ 70 nsec		
Jitter: (EXT TRIG IN to Pulse OUT)	± 15 psec					
DC offset or bias insertion:	Option available. Apply required DC offset or bias in the range of ± 50 volts (250 mA max) to back panel solder terminal. See note 3.					
Trigger required: (modules and -PS units)	+5 volt, 50 to 500 nsec (TTL)					
Trigger required: (-C EXT TRIG mode)	+5 volt, 50 to 500 nsec (TTL)					
Sync delay: (sync out to pulse out, -C units only)	Variable 0 to 500 nsec					
Sync output: (-C only)	+5 volts, 200 nsec, will drive 50 ohm loads					
Monitor output option ⁴ :	Provides a 20 db attenuated coincident replica of main output					
Connectors: -C: OUT TRIG SYNC MONITOR -PS: OUT IN MONITOR Modules: OUT IN POWER	SMA BNC BNC SMA SMA BNC SMA SMA SMA Solder terminals					
Power requirement: -C and -PS: Modules:	120/240 volts (switchable) 50-60 Hz +15 volt, 200 mA				+15 volt, 200 mA	
Dimensions (IN): -C and -PS: Modules:	4 x 8 x 12 1.7 x 2.6 x 4.2		4 x 8 x 12 4 x 6 x 8		NA 1.7 x 2.6 x 4.2	NA 2.3 x 1.4 x 1.1
Chassis material: -C and -PS: Modules:	anodized aluminum, with blue plastic trim cast aluminum, blue enamel					
Mounting:	Any					
Temperature range:	0° to +50°C					

- C suffix indicates stand alone lab instrument with internal clock and line powering.
-PS suffix indicates line powered instrument requiring external trigger.
No suffix indicates miniature module requiring DC power and external trigger.
(See page 4 for additional details of three basic instrument formats).
- Indicate desired polarity by suffixing model No. by -P or -N (i.e. positive or negative) or -PN for dual polarity option (-PN option available only for -C and -PS units).
- For DC offset option suffix model No. by -OS. Avtech Model AVX-T bias tee can also be used to obtain DC offset.
- For monitor option add suffix -M (available only on -C and -PS units).