

- 100 psec rise times
- Amplitudes to 40 volts
- PRF to 1.0 MHz
- Pulse widths variable from 0.2 to 500 nsec
- Stand alone lab instruments or miniature modules

The AVP series provides output pulses with 100 psec rise and fall times for variable pulse widths in the range of 0.2 to 500 nsec and PRF in the range of 0 to 1.0 MHz and amplitudes variable to 40 volts.

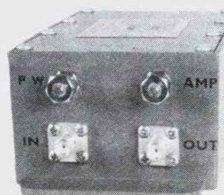
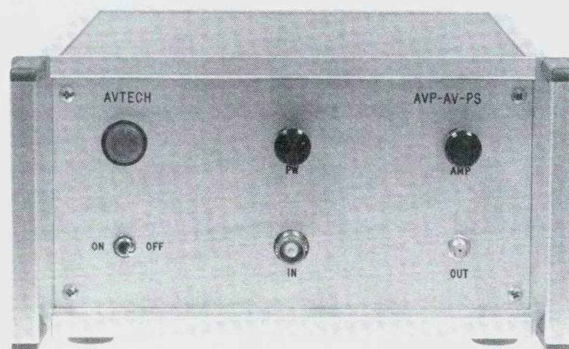
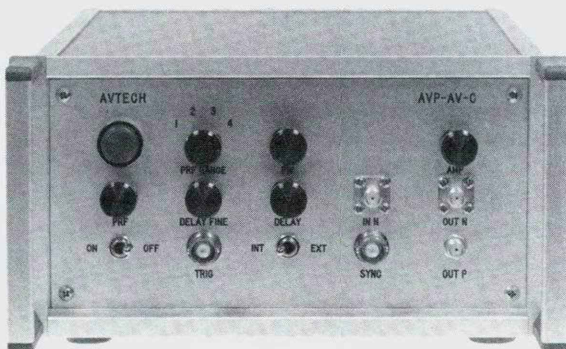
Model AVP-AV-1-C provides a 0 to 10 volt output pulse with pulse widths variable from 200 psec to 4.0 nsec via a front panel one turn pot control. Models AVP-AV-HV1-C, -HV2-C and -HV3-C are similar to Model AVP-AV-1-C but provide output amplitudes variable up to 15, 20 and 40 volts respectively. Model AVP-AV-1S provides a unique low rise time of 60 psec and an amplitude of up to 5 volts. Model AVP-AV-2-C provides output pulse widths variable from 5 to 50 nsec at PRF as high as 50 KHz. With a wide pulse option (-W) this model will operate in the output pulse width range of 20 to 500 nsec.

The pulse repetition frequency is variable from 50 Hz to 1.0 MHz (to 50 KHz for Model AVP-AV-2-C) using the internal clock oscillator which is controlled by a front panel four position switch and a one turn fine control. A delay control and sync output are 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 70 nsec (250 nsec for Model AVP-AV-2-C). 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 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. A second option provides an internally generated DC offset (0 to ± 5 volts) which is controlled by a front panel one turn control. All AVP units are also available with a monitor output option which provides an attenuated (20 db) coincident replica of the main output pulse. Additional options include electronic control (0 to +10V) of output amplitude, pulse width and DC offset. Units with these options also include the standard front panel one turn controls. Models with the -C suffix require 120/240V (switchable) 50-60 Hz prime power.

All AVP 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. Pulse width and output amplitude are controlled by one turn controls.

The AVP 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

AVP SERIES

Model:	AVP-AV-1S-C ¹ AVP-AV-1S-PS AVP-AV-1S	AVP-AV-1-C ¹ AVP-AV-1-PS AVP-AV-1	AVP-AV-HV1-C ¹ AVP-AV-HV1-PS AVP-AV-HV1	AVP-AV-HV2-C ¹ AVP-AV-HV2-PS AVP-AV-HV2	AVP-AV-HV3-C ¹ AVP-AV-HV3-PS AVP-AV-HV3	AVP-AV-2-C ¹ AVP-AV-2-PS AVP-AV-2
Amplitude ² : (50 ohm load)	0 to 5 volts	0 to 10 volts	0 to 15 volts	0 to 20 volts	0 to 40 volts	0 to 10 volts
PRF:	0 to 1.0 MHz					0 to 50 KHz
Rise time:	≤ 60 psec	≤ 100 psec			≤ 150 psec	≤ 100 psec
Fall time:	≤ 100 psec	≤ 135 psec	≤ 150 psec	≤ 200 psec	≤ 250 psec	≤ 135 psec
Pulse width ³ :	0.2-4.0 nsec		0.25 to 2.0 nsec	0.3-2.0 nsec	0.4-2.0 nsec	5-50 nsec or 20-500 nsec ⁴
Polarity ⁵ :	Positive or negative or both (specify)					
Propagation delay: (EXT TRIG IN to Pulse OUT)	≤ 70 nsec					250 nsec or 30 nsec ⁴
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 6.					
Trigger required: (modules and -PS units)	+5 volt, 50 to 500 nsec (TTL). ECL trigger option available					
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 ⁷ :	Provides a 20 db (X10) attenuated coincident replica of main output					
Connectors: -C: OUT TRIG SYNC MONITOR -PS: OUT IN MONITOR Modules: OUT IN MONITOR POWER	SMA BNC BNC SMA SMA BNC SMA SMA SMA SMA Solder Terminals					
Power requirement: -C and -PS: Modules:	120/240 volts (switchable) 50-60 Hz +15 volt, 200 mA					
Dimensions (IN): -C and -PS: Modules:	4 x 8 x 12 1.7 x 2.6 x 4.2					
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).
- For electronic control (0 to +10V) of amplitude or pulse width or DC offset suffix model No. with
-EA or -EW or -EO. Electronic control units also include standard front panel one turn controls.
- For 20-500 nsec pulse width, suffix model No. with -W. Rise time and fall time increase to 150 psec
and 200 psec for -W units. -W units have propagation delay of 30 nsec.
- Indicate desired polarity by suffixing model No. by -P or -N (i.e. positive or negative) or -P-PN or
-N-PN for dual polarity option where the suffix preceding -PN indicates the polarity at the uninverted
output port. (-PN available only for -C and -PS units).
- For externally applied DC offset option suffix model No. by -OS. Avtech Model AVX-T bias tee can also
be used to obtain DC offset. For internally generated DC offset option (0 to ±5V, one turn control) add
suffix -OT to model No. -OT and -EO options not available on modules.
- For monitor option add suffix -M.