

- Pulse widths as low as 350 psec
- Amplitudes to 100 volts
- PRF to 1.0 MHz
- Low jitter
- Stand alone lab instruments or miniature modules

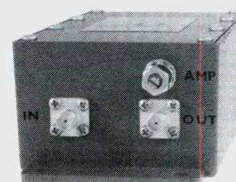
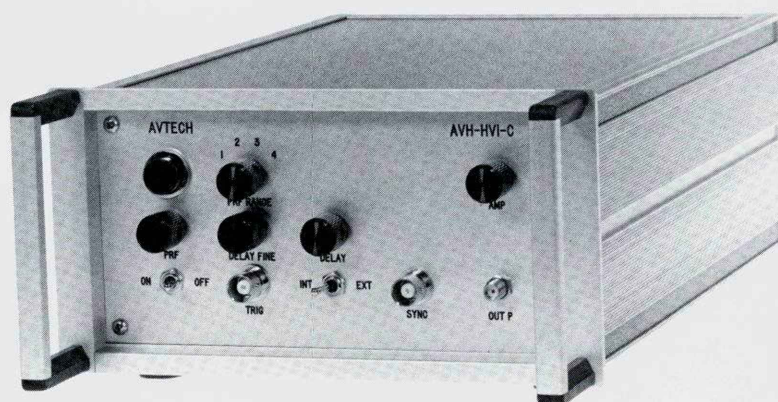
The AVH-HV series of low jitter high amplitude impulse generators includes units providing 10% rise time pulse widths in the range of 350 psec to 1 nsec and amplitudes from 30 volts to 100 volts with pulse repetition frequencies to 1 MHz. Model AVH-HV1-C generates a 1 nsec, 0 to 100 volt impulse while Models AVH-HV2-C and AVH-HV3-C provide 1 nsec, 80 and 60 volt outputs, respectively. Model AVH-S-HV1 generates a 40 volt impulse with a FWHM pulse width of 350 psec while Model AVH-S-HV2 provides a 30 volt impulse with a 10% rise time pulse width of 350 psec. All units include a one turn amplitude control.

The pulse repetition frequency of -C units is variable from 100 Hz to 1 MHz (to 100 KHz for 80 and 100 volt units) using the internal clock oscillator which is controlled by a four position range switch and a 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 50 nsec. Either output polarity can be provided. A DC offset or bias insertion option is available with most units. 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. Models with the -C suffix require 120/240V (switchable) 50-60 Hz prime power.

All AVH-HV 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.

The AVH-HV series complements the AVH series. For higher output amplitude, see the AVG series. In some cases, the specifications can be adapted to satisfy a particular requirement. Contact the factory for your special requirement.



SPECIFICATIONS

AVH-HV SERIES

| | | | | | |
|---|---|---|---|---|---|
| Model: | AVH-HV1-C ¹ AVH-HV1-PS AVH-HV1 | AVH-HV2-C ¹ AVH-HV2-PS AVH-HV2 | AVH-HV3-C ¹ AVH-HV3-PS AVH-HV3 | AVH-S-HV1-C ¹ AVH-S-HV1-PS AVH-S-HV1 | AVH-S-HV2-C ¹ AVH-S-HV2-PS AVH-S-HV2 |
| Amplitude: (50 ohm load) | 0 to 100 volts | 0 to 80 volts | 0 to 60 volts | 0 to 40 volts | 0 to 30 volts |
| Pulse width: (10% rise time) | ≤ 1.0 nsec | | | ≤350 psec (FWHM) | ≤350 psec |
| PRF: | 0 to 100 KHz | | 0 to 1.0 MHz | | |
| Polarity ² : | Positive or negative (specify) | | | | |
| Propagation delay: (EXT TRIG IN to Pulse OUT) | ≤ 50 nsec | | | | |
| Jitter: (EXT TRIG IN to Pulse OUT) | ± 15 psec | | | | |
| DC offset option ³ : | Apply required DC offset (± 50 V, 250 mA max) to back panel terminals | | | | |
| 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 200 nsec | | | | |
| Sync output: (-C only) | +5 volts, 200 nsec, will drive 50 ohm loads | | | | |
| Connectors: -C: OUT TRIG SYNC -PS: OUT IN Modules: OUT IN POWER | SMA BNC BNC SMA BNC 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 | | | | |

- 1) -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).
- 2) Indicate desired polarity by suffixing model No. by -P or -N (i.e. positive or negative).
Use AVX-2 transformer to invert polarity.
- 3) For DC offset option suffix model No. by -OS. Avtech Model AVX-T bias tee can also be used to obtain DC offset.