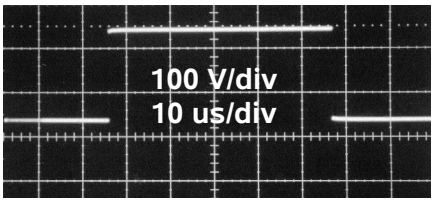
AVRF SERIES

1 - 10 ns RISE AND FALL TIME
100 - 400 VOLT PULSE GENERATORS
PULSE WIDTHS TO 1 us OR 100 us



- 100, 200, 300 or 400 Volt models
- 1 ns, 2 ns, 5 ns and 10 ns rise and fall times
- 1 us and 100 us pulse widths, PRF to 1 kHz
- IEEE-488.2 GPIB /RS-232 control

The AVRF series offers high-voltage outputs (to 400 Volts) with fast rise times and wide pulse width ranges. All models operate at pulse repetition frequencies up to 1 kHz.

The AVRF-1-B model provides amplitudes of up to 100V, with rise and fall times of 1 ns. The pulse width may be adjusted from 0.1 to 100 us, with a maximum duty cycle of 1%.

Model AVRF-2-B is similar, except that the amplitude is adjustable to 200V, with 2 ns rise and fall times, and the maximum duty cycle is 0.5%.

The 300 Volt AVRF-3-B has rise and fall times of 5 ns. The pulse width may be adjusted from 0.1 to 1 us, with a maximum duty cycle of 0.1%.

The 400 Volt AVRF-4-B has a 5 ns rise time when operating at 200V, and 10 ns rise time for 400V output. The fall time is 5 ns or less for all amplitudes. The pulse width may be adjusted from 0.1 to 1 us, with a maximum duty cycle of 0.1%.

All models with the "-B" suffix include a complete computer control interface (see http://www.avtechpulse.com/gpib for details). This provides GPIB and RS-232 computer-control, as well as front panel keypad and adjust knob control of the output pulse parameters. A large back-lit LCD displays the output amplitude, polarity, frequency, pulse width or duty cycle as appropriate, and delay. To allow easy integration into automated test systems, the programming command set is based on the SCPI standard, and LabView drivers are available for download at the Avtech web site (http://www.avtechpulse.com/labview). An Ethernet port for Telnet-based control is optional on all -B units (-TNT option, for details see http://www.avtechpulse.com/options/tnt).

All models are protected from overload conditions (such as excessively high duty cycle or short circuited load) by an automatic control feature that limits the output power for as long as the overload condition exists. A manual push button is provided for one-shot operation. A delay control and sync output is provided for scope triggering purposes.

When triggered externally by a TTL-level pulse, the output pulse width may be controlled by the front-panel settings, or it may be set to track the input pulse width. The propagation delay in the externally triggered mode is typically 100 ns. Either output polarity can be provided. (A dual polarity option is also available).

All models require 100-240 Volts, 50-60 Hz.

Model:	AVRF-1-B[1]	AVRF-2-B[1]	AVRF-3-B[1]	AVRF-4-B[1]
Amplitude[2,3]: (50 Ohm load)	0 to 100 Volts	0 to 200 Volts	0 to 300 Volts	0 to 400 Volts
Rise time (20%-80%):	≤ 1 ns	≤ 2 ns	≤ 5 ns	≤ 5 ns for 200V, ≤ 7 ns for 300V, ≤ 10 ns for 400V
Fall time (80%-20%):	≤ 1 ns	≤ 2 ns	≤ 5 ns	≤ 5 ns
Pulse width (FWHM):	0.1 to 100 us		0.1 to 1.0 us	
PRF:	0 to 1 kHz			
Duty cycle (max):	1.0%	0.5%	0.1%	
Average power out (max):	4 Watts			
Polarity[4]:	Positive or negative or both (specify[4])			
Propagation delay:	≤ 100 ns (Ext trig in to pulse out)			
Jitter (Ext trig in to pulse out):	± 100 ps ± 0.03% of sync delay			
Trigger required: (external trigger mode)	Mode A: + 5 Volts, 50 ns or wider (TTL) Mode B: + 5 Volts, PW_{IN} = PW_{OUT} (TTL)			
Sync delay:	Variable 0 to ± 100 us		Variable 0 to ± 1 us	
Sync output:	+ 5 Volts, 200 ns, will drive 50 Ohm loads			
Gate input:	Synchronous or asynchronous, active high or low, switchable. Suppresses triggering when active.			
Connectors:	Out: SMA, Trig, Sync, Gate: BNC			
GPIB and RS-232 control[1]:	Standard on -B units.			
Telnet / Ethernet control[4]:	Optional. See http://www.avtechpulse.com/options/tnt for details.			
Power requirements:	100 - 240 Volts, 50 - 60 Hz			
Dimensions: (H x W x D)	100 mm x 430 mm x 375 mm (3.9" x 17" x 14.8")			
Rack-mount kit:	Optional. Add -R5 to the model number.			
Temperature range:	+5°C to +40°C			

1) -B suffix indicates IEEE-488.2 GPIB and RS-232 control of amplitude, pulse width, PRF and delay. (See http://www.avtechpulse.com/gpib).
2) For operation at amplitudes of less than 20% of full-scale, best results will be obtained by setting the amplitude near full-scale and using external attenuators on the output.
3) For analog electronic control (0 to +10V) of amplitude, suffix model number with -EA. Electronic control units also include the standard front-panel controls.
4) Indicate desired polarity by suffixing model number with -P or -N (i.e. positive or negative) or -PN for dual polarity (switch controlled).
5) Add the suffix -TNT to the model number to specify the Telnet / Ethernet control option.

AVRF-1-B