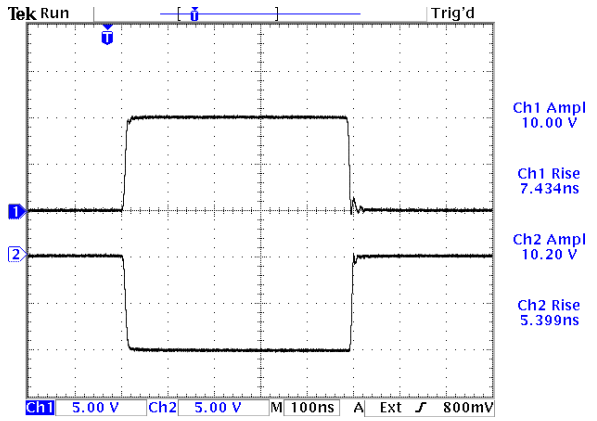
MODEL AV-1023-C

10 MHz DUAL-CHANNEL
LAB PULSE-DELAY GENERATOR
10 ns RISE TIMES



- Two channels with independent amplitudes, polarities, delays and pulse widths
- Outputs can be inverted, complemented, and added together
- ± 10 Volt outputs, 10 MHz
- 10 ns rise and fall times
- User-friendly front panel
- Extremely versatile
- Dual pulse generator, delay generator, and DC power supply all-in-one!

The versatile Model AV-1023-C is a 10 MHz dual-channel general-purpose lab pulse generator and delay generator providing 0 to ±10 Volts, 10 ns rise time, variable pulse widths and delays, self-explanatory front panel controls and a heavy-duty metal chassis for low emissions and decades of trouble-free service.

Channels A and B share a common trigger source, but have independently controlled delays, pulse widths, polarities, and amplitudes (see Figure 1).

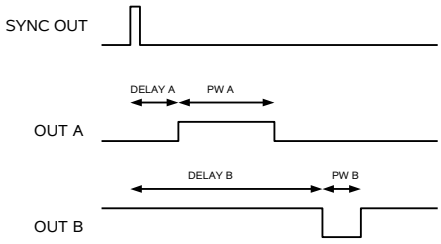


Fig. 1

The two output channels can be summed together, if desired. One output connector can supply either A or A+B, and the other can supply B or B+A. Two examples of summing are shown in Figure 2.

With the same settings as Fig. 1:

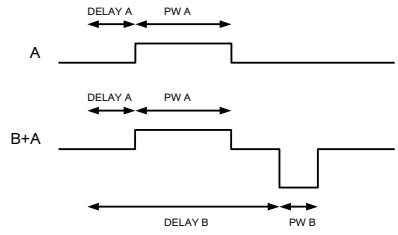
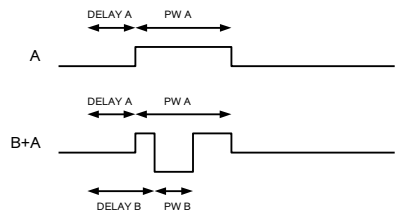


Fig. 2

Or with reduced Delay B:



The AV-1023-C can be triggered internally, with the frequency controlled by a 7-position range switch and a one-turn fine control, from 1Hz to 10MHz. The AV-1023-C can also be triggered externally by a TTL (0 to +5V) signal on the TRIG input. A SYNC output provides a narrow pulse to trigger oscilloscopes. The A and B channels are delayed relative to this SYNC output. The pulse widths and delays are variable from 50 ns to 0.5 sec and are controlled by 7-position range switches and one turn fine controls. The pulse widths may also be set to the "DC" mode, allowing each channel to act as a variable ±10 Volt, 200 mA DC power supply, or to supply a DC offset when summed with the other channel.

Channels A and B may be polarity-inverted (i.e. from positive to negative voltages) or logic-complemented (i.e. high and low voltage levels reversed) to provide a wide variety of output waveforms.

The output impedance can be set at 50Ω (for transmission-line backmatching) or at 1Ω for maximum voltage output.

With this degree of versatility, the AV-1023-C is a general-purpose workhorse - perhaps the only pulser and delay generator that you'll ever need!

Figure 3 demonstrates the versatility of the AV-1023-C, by showing the ease with which the waveforms for measuring semiconductor switching recovery times can be generated:

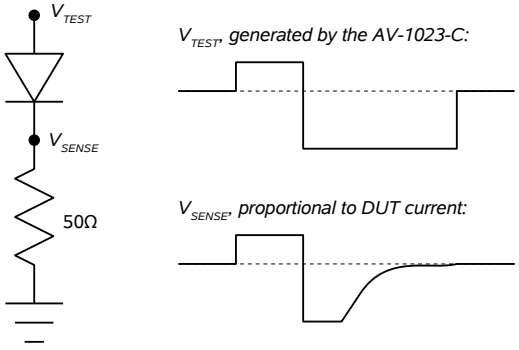


Fig. 3

Model:	AV-1023-C
Number of channels out:	Two
Pulse Repetition Rate:	1 Hz to 10 MHz
Amplitude (to 50 Ohms):	0 to ± 10 V (± 5 V if Z_{OUT} = 50 Ω)
Pulse width (FWHM):	50 ns to 0.5 sec
Rise & fall times (20%-80%):	≤ 10 ns
DC offset:	0 to ± 10 Volts (± 5 V if Z_{OUT} = 50 Ω) when used in summing mode with one channel's PW set at “DC”
Source impedance:	1 Ohm or 50 Ohms
Polarity:	Positive or negative
Duty cycle (maximum)1:	0 - 3 MHz: 80%, 3 - 5 MHz: 70%, 5 - 10 MHz: 50%, 100% in PW DC mode
Overshoot, undershoot, ringing and slope aberration:	< ± 3% at amplitudes of >300 mV with outputs terminated in 50 Ω.
Propagation delay:	80 ns to 0.5 sec (Ext trig in to pulse out)
Trigger required (Ext trig mode):	+5 Volts, > 40 ns (TTL) Trigger input impedance: 1 kΩ
Sync delay, jitter:	35 ns to 0.5 sec, ≤ ±50 ps or ±0.05% (sync out to pulse out)
Sync output:	+2 Volts, 50 ns, will drive 50 Ohm loads
Signal connectors:	BNC
Power requirement:	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”)
Chassis material:	Anodized aluminum, with blue-grey plastic trim
Temperature range:	+5°C to +40°C
Rack-mount kit:	Optional. Specify -R5 option.

1) The outputs can be logically-complemented, effectively extending the duty cycle range.

AV-1023-C

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