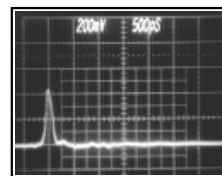


Kentech Instruments Ltd.

APG1 Avalanche Pulse Generator

The APG1 is a general purpose pulse generator intended for applications such as fiducial marking and laser diode driving. The specification is as follows:-

Minimum peak amplitude	>100 volts
Polarity:	Either positive or negative, but this must be specified when ordering. Polarity cannot be changed.
Maximum f.w.h.m.	< 150 ps
Peak to peak jitter	<20ps
Post pulse noise	< 8% up to 0.5 ns <4% from 0.5 to 1.5 ns <2% later
Maximum pulse repetition frequency	> 10kHz
Internal rate generator over range	1Hz to 10kHz
Adjustable internal precision delay generator	continuously variable up to 100ns
Monitor output pretrigger (arrives at start of delay)	
2nd monitor output (approximately synchronous with main output.)	
Connectors	BNC trigger input, monitor and auxiliary outputs, SMA main output
Power requirements	240/120 volts A.C. at <100watts 100 volts A.C. to special order



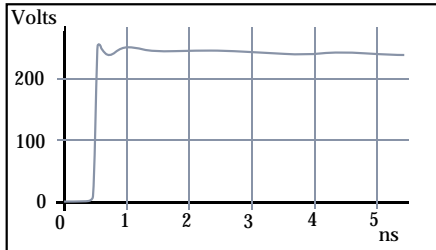
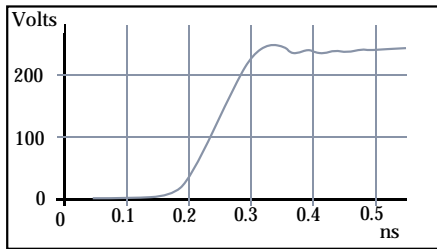
APG1/P
100V/div
500ps/div

Kentech Instruments Ltd.

ASG1 Fast Rise High Voltage Step Generator

The ASG1 Avalanche Step Generator is a general purpose high voltage step generator with a transition time of $<100\text{ps}$ and an amplitude > 200 Volts into a $50\ \Omega$ load. The generator will operate at > 750 Hz and may be triggered externally or internally with an integral rate generator. The trigger delay is > 20 ns; however, provision is made for a 100 ns pretrigger output should it be required in, for example, a sampling system.

Typical output into $50\ \Omega$ *



Specifications

- Output voltage: >200 V, $50\ \Omega$
- Rise time: 100 ps (10-90%)
- Flatness* : 0 - 6 ns: $\pm 4\%$ or better
- Pulse length: 8 ns flat top followed by approximately exponential decay with 50ns time constant.
- Polarity: Either positive or negative, but this must be specified when ordering. Polarity cannot be changed.
- Trigger: Requires 10 Volts into $50\ \Omega$, $<5\text{ns}$ rise time.
- Delay: $<20\text{ns}$ ($<120\text{ns}$ with pretrigger selected)
- Jitter: $\leq \pm 20$ ps
- Pretrigger output: ~ 100 ns before main pulse (when selected) +10 Volts, $50\ \Omega$
- Repetition rates: External: $\leq 0.75\text{kHz}$ Internal: Single shot to 0.75kHz
- Power supply: 12 V DC, 120 V AC or 240 V AC, to be specified when ordering.
- Connectors: BNC inputs, SMA output

* Test setup: Barth[®] x10 followed by 2 x Tektronix[®] x10 attenuators into S4, 7S11 and 7T11

