

## Fast Edge Generator



### Applications

- PCB Characteristic Impedance Measurements
- Oscilloscope and probe response testing
- Cable and interconnect response testing
- Cable Length Measurements

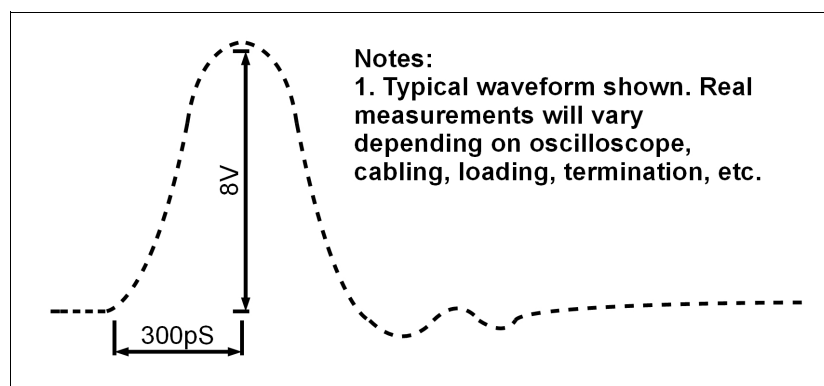
### Specifications

Rise Time	300pS, <i>Note 1</i>
Amplitude	8V, <i>Note 1</i>
Connector	SMA female
Power Source	Two AA batteries, Alkaline or NIMH
Power Consumption	Less than 10mA when powered with 2 Alkaline cells
Dimensions/Weight	9cm x 5cm x 5cm, 120g(including batteries)

#### Notes:

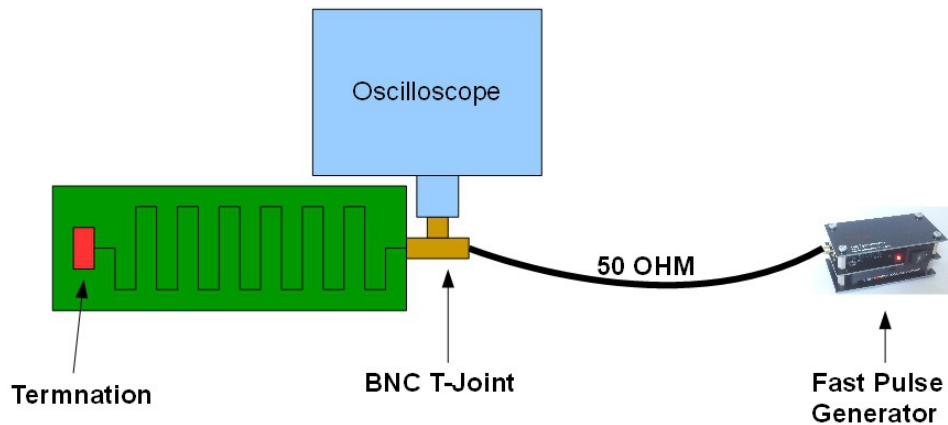
1. Real measurements will vary depending on oscilloscope, probes, cabling, termination, etc.

### Typical Pulse Shape



## Measuring PCB characteristic impedance

1. Connect Edge generator to PCB using a 50 ohm cable.
2. Connect oscilloscope to the point where the 50 ohm cable connects to the PCB.
3. Turn on the pulse generator and compare incident waveform to the reflected waveform. Adjust termination until the reflection is under control.



### Notes:

1. BNC T-Joint can be omitted if signal can be probed directly on the PCB.
2. Depending on physical obstructions, 50 OHM cable can be omitted and pulse generator can be connected directly to PCB.
3. Adding test traces to the break away tooling strips around the edge of a PCB panel is a convenient way to verify impedance.
4. A potentiometer can be handy to quickly adjust termination, instead of having to solder/desolder discrete parts. Just keep in mind that it has higher pin inductance compared to a surface mount resistor.