

NRG1001 High Voltage Nanosecond Rectangular Pulse Waveform Generator



- Compact and powerful
- Simple control and maintenance free
- Operation with high impedance and 50 Ohm matched loads
- Long operation life time

Entirely semiconductor technology based on Drift Step Recovery Diodes (DSRD) ensures stable output pulse waveform, high reliability, efficiency, and long operation lifetime.

NRG1001 provides rectangular high-voltage nanosecond pulses with fixed pulse width and rise/fall times while amplitude and repetition rate can be altered in a wide range. The generator can operate with 50 Ohm and high impedance loads. The special dumping circuit minimizes the afterpulse ringing and spikes below 15% in all operation regimes. The max output pulse amplitude is 10 kV on a high impedance load and 5 kV on 50 Ohm. There are both internal and external triggering modes.

Amplitude regulated 1.5...5 kV @ 50 Ohm
 regulated 3...10 kV @ high Z load

Polarity positive

Rise/fall time less than 4 ns

Width (FWHM) 10 ns, fixed

Repetition rate 1 Hz to 1 kHz
 single pulse *)

Internal delay 1 μ s or less

Jitter (RMS) 1 ns

Internal and external triggering

Special output HV coaxial connector

SYNC IN and SYNC OUT BNC connectors

Power supply AC 110...230V / 50...60 Hz

*) single pulse mode for the external triggering only

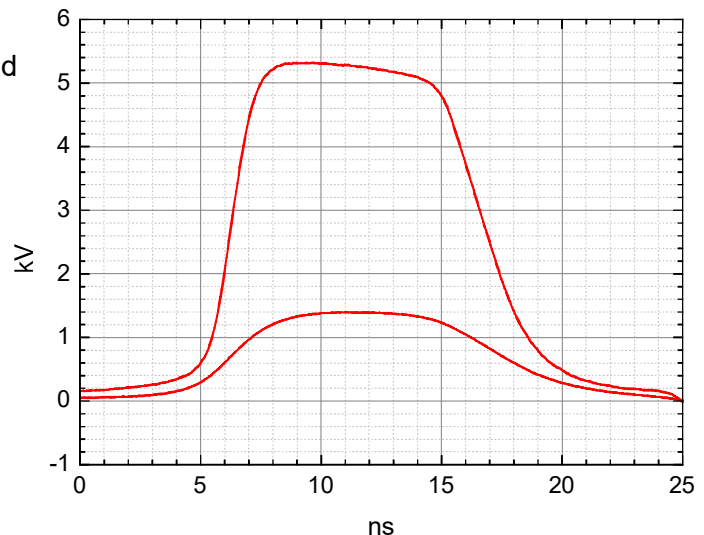


Fig.1. Typical output pulse waveforms on 50 Ohm load at max and min set amplitudes.

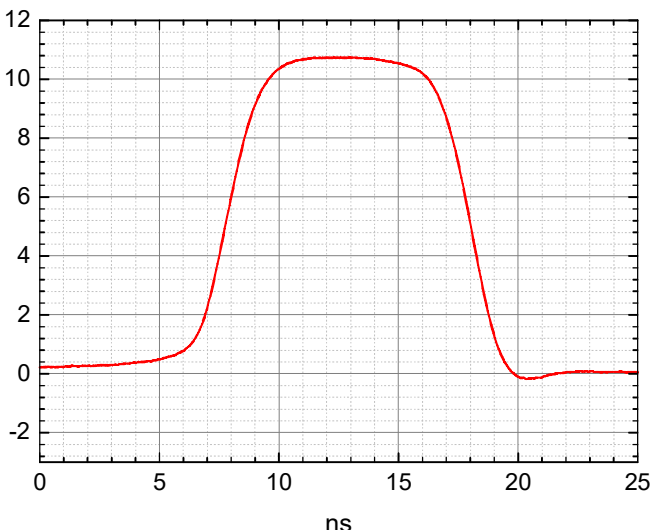
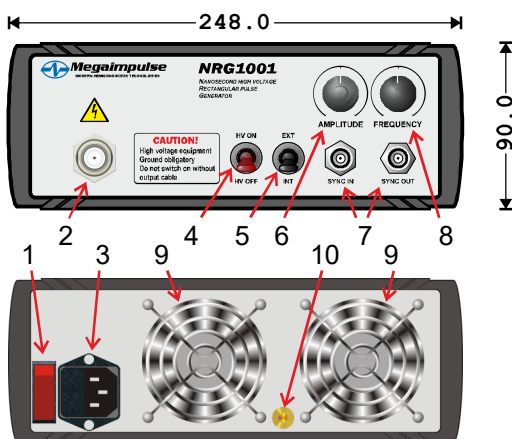


Fig.2. Typical max output pulse waveform on high impedance load.

- 1 - power supply ON/OFF switch
- 2 - special type HV output coaxial connector
- 3 - C14 power supply connector and fuse holder
- 4 - high voltage ON/OFF toggle switch
- 5 - EXT/INT toggle switch
- 6 - amplitude regulation knob
- 7 - SYNC IN and SYNC OUT BNC type connectors
- 8 - frequency regulation knob
- 9,10 - cooling fans and ground terminal