

# High voltage burst mode nanosecond pulse generator



## NPG-10/100k

- Compact and powerful, smart and versatile
- User friendly and maintenance free
- Fully digital control
- 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 life time.

NPG-10/100k can supply the discharge reactors of any type as well as it is suitable for other applications which require high voltage nanosecond rise time pulses. The output pulse waveform is bell-like. The rise time and pulse width are fixed, while the pulse energy can be smoothly adjusted in two times and repetition rate from 1 Hz to 30 kHz in continuous mode and up to 100 kHz in burst operation mode. The maximum number of pulses in a second (burst length) is limited to 30000.

Amplitude regulated 7...11 kV @ 75 Ohm  
 up to 22 kV on discharge

Polarity positive (NPG-10/100k)  
 negative (NPG-10/100kN)

Rise time less than 4 ns

Width (FWHM) less than 10 ns

Pulse energy regulated 4...8 mJ

Repetition rates and operation modes:

continuous up to 30 kHz @ 4mJ  
 up to 20 kHz @ 6mJ  
 up to 15 kHz @ 8mJ

burst from 1 Hz to 100 kHz

Max burst length 30k@4mJ, 20k@6mJ,  
 15k@8mJ

Internal delay 1  $\mu$ s or less

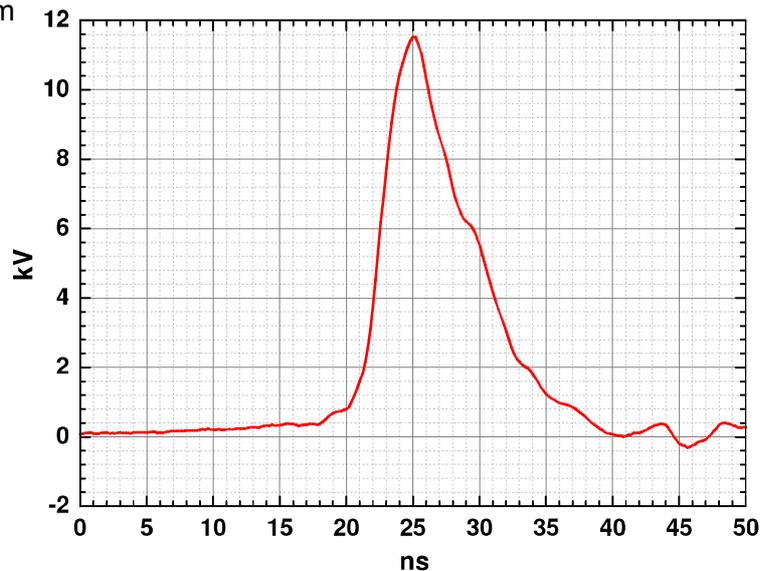
Jitter (RMS) 1 ns

Internal and external triggering

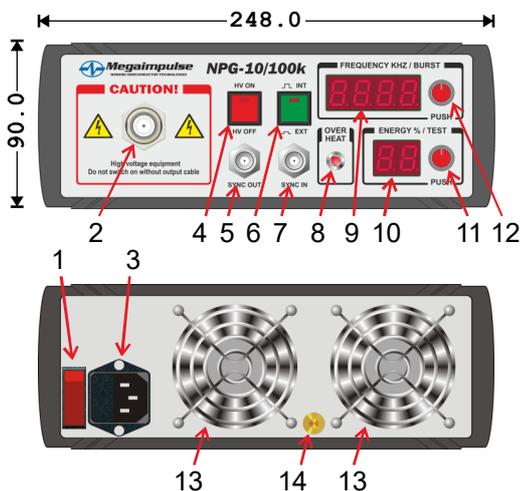
Special output HV coaxial connector

SYNC IN and SYNC OUT BNC connectors

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



Typical pulse waveform on matched 75 Ohm load



- 1 - power supply ON/OFF switch
- 2 - special type HV output coaxial connector
- 3 - C14 type power supply connector and fuse holder
- 4 - high voltage ON/OFF push button with ON state LED indicator
- 5 - SYNC OUT connector, BNC type
- 6 - INT/EXT synchronization button with LED indicator
- 7 - SYNC IN connector, BNC type
- 8 - overheat LED
- 9 - frequency and number of pulses in burst, 4-digit display
- 10 - output pulse energy, 2-digit display
- 11 - output pulse energy regulation knob with push button
- 12 - frequency and number of pulses in burst regulation knob with push button
- 13 - cooling fans
- 14 - rear panel ground terminal