High voltage nanosecond pulse generator

NPG-18/3500(N)

- Compact
- Low cost
- Long operation lifetime

Based on Drift Step Recovery Diodes (DSRD), new type of semiconductor devices which allow to obtain high reliability, high efficiency and long operation life time.

NPG-18/3500(N) generator is designed for barrier and other type discharge systems as well as others applications which requires high voltage power nanosecond pulses. Compact, reliable and cost-efficient, it can provide up to 4.5 MW peak power and about 100 W average power at the load. This generator has improved triggering and operation compared with previous models.

Pulse amplitude  regulated 12 - 20kV at matched 75 Ohm load
up to 40kV at discharge reactor

Pulse polarity positive (NPG-18/3500)
negative (NPG-18/3500N)

Pulse rise time  less than 4 ns

Max pulse energy  30mJ

Peak pulse power  5.3 MW

Repetition rate  from single pulse*) to 3.5 kHz

Inherent delay  1 μs or less

Jitter (RMS)  less than 1 ns

Special output connector for HV applications

Internal and external triggering

BNC connectors for external triggering and pulse monitoring

*) single pulse mode in case of external triggering only

Typical pulse waveform at barrier discharge reactor

1 - power switch
2 - output connector
3 - power supply and fuse
4 - high voltage ON/OFF switch
5 - EXT/INT synchronization switch
6 - SYNC IN (BNC type)
7 - overheat LED
8 - amplitude regulation knob
9 - SYNC OUT (BNC type)
10 - frequency regulation knob
11 - fans
12 - ground terminal