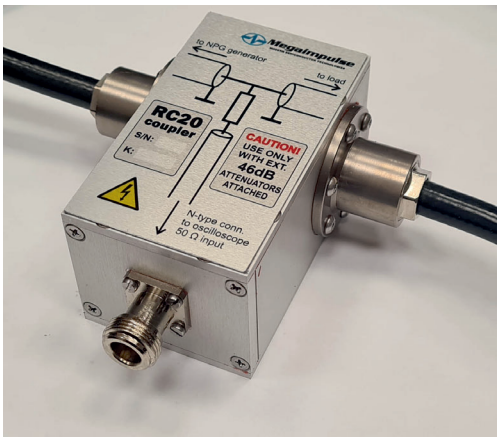
Megaimpulse
MODERN SEMICONDUCTOR TECHNOLOGIES

RC20 resistive coupler



- Precise measurement of the incident and reflected pulse waveforms
- “Must have” tool for the measurement of pulse energy, cable-to-load impedance matching, and evaluation of the energy balance of the discharge
- Designed for the operation with NPG series pulse generators
- 75 Ohm impedance of HV cables, 50 Ohm impedance of the output connector to oscilloscope

RC20 resistive coupler allows the precise measurement of the HV output pulse waveform of NPG series pulse generators and pulse waveform reflected from the load. Based on the obtained oscillogram, the precise calculation of the incident and reflected pulse energies, as well as the total energy balance of the discharge, is possible. Additional valuable information about the breakdown voltage and the evolution of the discharge impedance over time becomes available.
RC20 coupler should be connected to the HV output of NPG generator instead of the standard HV coaxial cable. The pulse waveforms are registered by the external oscilloscope.

Max HV pulse amplitude	20 kV
Max average power	120 W
Rise time	1.5 ns
Nominal RC20 division coefficient	1:50
HV input and output impedance	75 Ohm
Measurement output impedance	50 Ohm
Measurement output connector	N-type
Standard accessories:	
6dB attenuator	- 1 pcs.
20dB attenuator	- 2 pcs.
3 meters length semirigid cable	- 1 pcs.
SMA-to-BNC coaxial adapter	- 1 pcs.
Total division coefficient of RC20 coupler with 6dB+20dB+20dB attenuators	1:10000

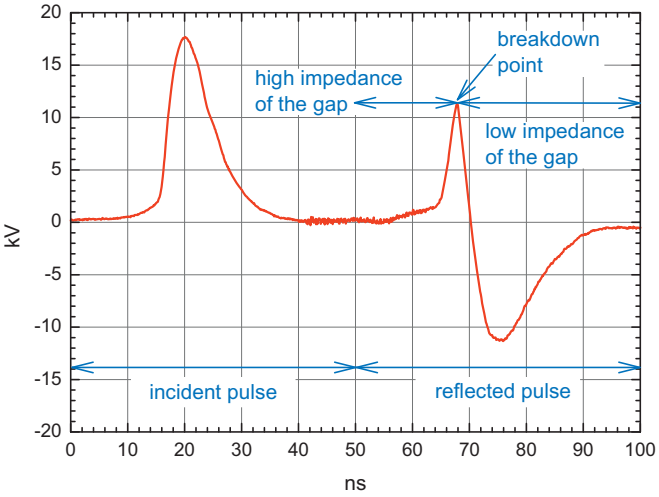
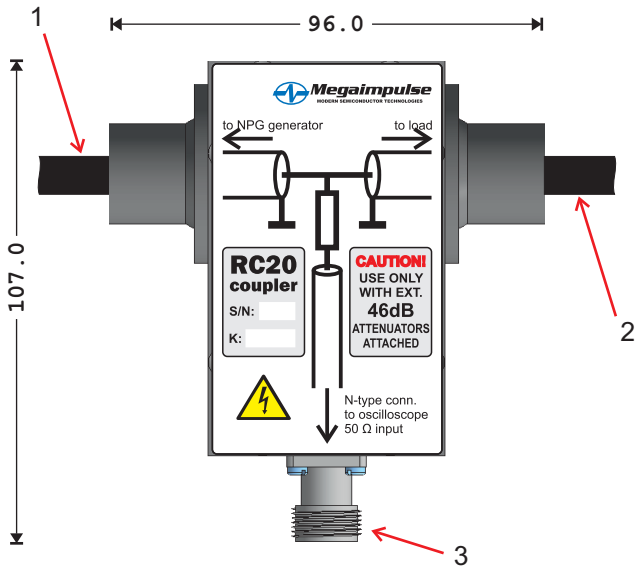


Fig.1. Oscillogram of the incident pulse and delayed by 50 ns reflected pulse registered by RC20 coupler. One can see the breakdown point. The reflected pulse polarity is the same as of the incident one in the case of high impedance load and reversed if the load impedance is lower than 75 Ohm.



1 - HV coaxial cable to NPG generator, 5 meters length, 75 Ohm impedance, with standard HV connector
2 - HV coaxial cable to the load, 5 meters length, 75 Ohm impedance
3 - N-type connector to the oscilloscope

* dimensions are in mm

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