

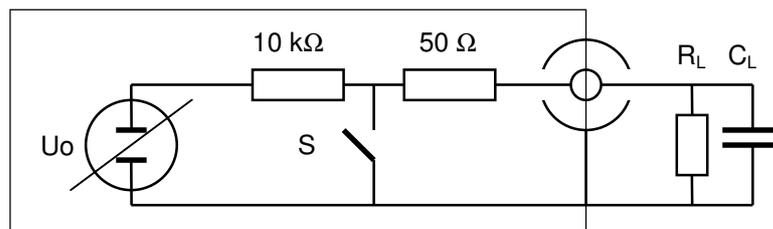
PULSE GENERATOR

IPG 250



The pulse generator IPG 250 is designed for measuring the step response of high-impedance networks, for instance voltage dividers, oscilloscope probes etc. The generator excels by calibrated adjustment of output amplitude, short rise time and flat pulse top. The output pulse amplitude can be adjusted by use of a 10-turn potentiometer from 0 to 250 V. Positive and negative polarity can be selected.

Pulse output amplitude can be verified by external measurement with a digital voltmeter. The rise time and the flatness of the pulse top is guaranteed by the components used and the principle of operation.



The external load impedance R_L , C_L is connected in series with $10\text{ k}\Omega$ to a dc-power supply, whose output voltage is adjustable by a precision potentiometer from 0 V to $\pm 250\text{ V}$. The make connect switch S short circuits the voltage across the load impedance periodically. During short circuit, the generator's source impedance is $50\ \Omega$.

Operational modes:

- a) - dc-voltage output, 0 - 250 V
- b) SINGLE single pulse generation
- c) REP. repetitive pulse generation:

The repetition rate of pulse generation can be switched to app. 200 Hz (FAST) or to app. 1 Hz (SLOW). The rise time of the pulse slope generated by closing the switch S is less than 3 ns. For special applications, the $50\ \Omega$ -resistor can be removed.

Special version IPG 251: Fast rise pulse generator ($t_a < 5\text{ ns}$) and exponential decay.
 Energy storage capacitor $C_s = 0.1\ \mu\text{F}$
 Source resistance $R_i = 50\ \Omega$

Special version IPG 1002: Fast rise pulse generator
 Output voltage $t_r < 3\text{ ns}$
 Source resistance 0 - 1000 V
 Repetition rate $50\ \Omega / 10\text{ k}\Omega$
 $1\text{ Hz} / 100\text{ Hz}$