

ABSTRACT

SELF-RECOVERY HIGH-VOLTAGE PULSE DRIVER

A self-recovery high-voltage pulse driver according to the present application includes a high-speed pulse driving unit and a high-voltage pulse generation unit, the high-speed pulse driving unit is provided with a high-voltage switch Q, the high-voltage pulse generation unit includes a high-voltage capacitor C and a resistive network, and the high-voltage capacitor C is connected to the high-voltage switch Q, a first high-voltage HV1, a second high-voltage HV2 and a third high-voltage pulse HV3 via the resistive network. The first high-voltage HV1 and the second high-voltage HV2 are generated to the third high-voltage pulse HV3 by the high-speed pulse driving unit via the high-voltage switch Q and the high-voltage capacitor C, and the third high-voltage pulse HV3 automatically recovers to the second high-voltage HV2 after the high-voltage pulse is outputted. The self-recovery high-voltage pulse driver has quick response, good stability and high output voltage amplitude, recovery time is configured based on time constants of resistance and capacitance, which has a fast response speed and high output voltage amplitude, and enhances response time of the whole system, thereby facilitating the expansion of the system.

Figure 1