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A WAY TO IMPROVE THE ENERGY EFFICIENCY OF PULSE DIELECTRIC BARRIER DISCHARGE

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Abstract

The researches of unipolar pulse dielectric barrier discharge in a coaxial chamber are executed. It is shown that the capacitive energy that remains on dielectric barrier after graduation forward discharge can effectively (~99%) be used in reverse discharge to connect parallel discharge camera a magnetic switch. A magnetic switch is made in such a way that its core saturates immediately following after graduation discharge. The main requirements, when a magnetic switch is designing, are specified. It is shown that the use of harmonized with electrical circuit a magnetic switch allows you to correctly identify density of electrons and their average energy in

the gas part of the interelectrode gap during discharge. References 7, figures 4, table 1.

Key words: pulse dielectric barrier discharge, energy of a pulsed, dielectric barrier, magnetic switch.

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