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Pulse energy storage generator



Overview

What is a pulse generator?

Such pulse generators are typically utilized in large-scale facilities that require particularly high levels of voltage and current with utmost reliability. A feasible approach to enhance performance is through the utilization of power electronics.

What is hybrid energy storage based on pulse power generation?

Abstract: As an extension research of pulse power generation method, we proposed a new variant of pulse generation circuit based on hybrid energy storage (HES). The energy storage structure of the proposed circuit is a series connection of two capacitors and one inductor, referred as a CLC series HES circuit.

What is a pulsed power generator based on LTD?

Additionally, for an LTD system, different modules can be switched at different timings, which means pulse shape flexibility. The pulsed-power generators based on LTD started with large devices where gas switches are used, aiming at potential applications to inertial fusion drivers.

How do you generate high-voltage pulses?

There are primarily two fundamental approaches to generate high-voltage (HV) pulses, differing in their methods of energy storage. One approach involves storing electric field energy in capacitors, which is followed by energy transfer to the load.

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A compact inductive energy storage (IES) pulsed-power generator that is driven by a novel 13 kV silicon carbide (SiC)-MOSFET is developed and molded into a compact ...

The inductive energy storage pulsed power generator using GaN FETs as opening switches has developed, and the output obtains a maximum voltage of ~900 V with rise/fall ...

What are the pulse energy storage technologies? 1. Pulse energy storage technologies encompass systems designed to store and release energy in short bursts for ...

References [1] A solid-state pulse power sub-nanosecond SiC DSRD-based generator with high-voltage and high repetition frequency for pulse discharge water treatment. ...

The results of the study and development of high-power nanosecond pulse generators with an intermediate inductive energy storage and semiconductor opening switch ...

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It is a new way to obtain nanosecond high voltage pulse by employing inductive pulse forming line and voltage adder technology. In this paper, the basic principle of the generator is described, ...

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NKOSITHANDILEB SOLAR

Phone: +27-11-934-5771

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