Multi-peak characteristics of series photovoltaic panels

A public charity, IEEE is the world"s largest technical professional organization dedicated to advancing technology for the benefit of humanity. © Copyright 2025 IEEE - All rights reserved, including rights ...

This paper proposes a simple yet fully adaptive particle swarm optimization (PSO) algorithm to find the global peak (GP) of a photovoltaic (PV) array under partial shading condition.

To overcome the problem of the output power drop due to the multi-peak property of the characteristic curve of the PV system under PSCs, some researchers have proposed methods which ...

MPPT is the process of adjusting the load characteristic as the conditions change. Circuits can be designed to present optimal loads to the photovoltaic cells and then convert the voltage, current, or ...

In view of the problems that the local shadow to the photovoltaic (PV) power generation system, which reduces the output power and generates multiple peaks on o

Aiming at the multi-peak MPPT problem of the output characteristics of series-connected PV cells under localized shading, this paper proposes a multi-peak PV MPPT method based on the ...

A system was implemented in MATLAB/Simulink, consisting of a PV array of six modules connected in a series configuration, a DC-DC boost converter, and a load.

Aiming at the maximum power point tracking problem of photovoltaic PV arrays under multi-peak conditions, this paper compares and analyzes the advantages and disadvantages of the ...

In recent years, the global transition toward renewable energy has intensified, with photovoltaic (PV) systems playing a pivotal role. However, partial shading conditions (PSC) often ...

Multi-peak characteristics of series photovoltaic panels

For the photovoltaic multi-peak problem, in the case of constantly changing external light, after comparative analysis, the QL-ISCSO algorithm tracks to the maximum power point the fastest, ...

Web: https://nerdrepublic.co.za