
Solar Photovoltaic Cell Modeling Basics

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Abstract:

This video introduces the basics of solar photovoltaic (PV) cell modeling for interactions with power converters that control its operation. The basic concept of the photoelectric effect is explained along with how a solar cell works. Next, the solar PV circuit model is explained for use in circuit simulation. Then, the solar cell is connected to a dc-dc converter that controls its operation. The concepts of control for solar PV cells, protection against reverse current flow into the PV cells, and a bypass diode are briefly explained.

Keywords:

Photovoltaic effects, Solar power generation, Solar energy, Photovoltaic power systems
