

**CONFIGURATION OF MAXIMUM POWER POINT TRACKING
(MPPT) WITH BOOST CONVERTER**

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ABSTRACT

The main purpose of this project is to observe types of configurations using photovoltaic (PV) boost converter modules for maximum power point tracking (MPPT) might be affected by load. There are three types of loads that use in this simulation which are resistive load, voltage load, and current load. Then, PV modules connected in single, parallel, and series converter with using this three type of loads to compare the calculation value and simulation value. The most important model component in the PV modules is the solar module. The characteristics of the solar module model were simulated and compared with the original field test data. Then, a model of a photovoltaic system with maximum power point tracker was established and simulated which was developed using DC-DC boost converter with the perturbation and observation (P&O) method. Although the PV modules operate almost based on PV parameters, the system converges to maximum output power operation. The characteristics, advantages, and limitations for each configuration are measured.

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