Abstract

In this paper, a single-stage grid-connected flyback microinverter is proposed. The proposed flyback microinverter has some advantages such as high voltage gain, high efficiency, low cost, small size, simple control and high power factor. The proposed system is used to connect the PV panel to the grid with achieving maximum Power Point Tracking (MPPT) control. The converter operates in DCM to inject a sinusoidal current into the grid with unity power factor. A complete system has been simulated using PSIM program. The simulation results are obtained to validate the system.

References

Single-Stage Grid-Connected Flyback Microinverter Operating in DCM for Photovoltaic AC Modules


Index Terms

Computer Science

Power Systems
Keywords

Single-Stage, grid-connected, Microinverter, Flyback, DCM, MPPT.