A Low Cost Bi-Directional Grid Tied PV Microinverter

Abstract:

The proposed invention is a Low cost bi-directional Photovoltaic (PV) microinverter providing bi-directional power flow between a load and plurality of power sources and also between said plurality of power sources. It has a cascade connection of a decoupling capacitor, a switching stage having half bridge configuration, a resonant tank circuit (series connection of inductor and capacitor), a high frequency transformer, filter capacitors and a low frequency switching network consisting of semiconductor switches configured in full bridge arrangement.