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Optimisation of Photovoltaic Array with DC-DC Converter Groups

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Abstract : In power electronics the DC-DC converters or choppers are now employed in large areas, particularly in the field of electricity generation by wind and solar energy conversion. Photovoltaic generators (GPV) can deliver maximum power for a point on the characteristic P = f (Vpv), called maximum power point (MPP), or climatic variations, entraiment fluctuation PPM. To remedy this problem is interposed between the generator and receiver a DC-DC converter. The converter is usually used a simple MOSFET chopper. However, the MOSFET can be applied in the field of low power when you need a high switching frequency but becomes highly dissipative when should block large voltages For PV generators medium and high power, the use of IGBT chopper is by far the most recommended. To reduce stress on semiconductor components using several choppers series connected in parallel is known as interleaved chopper. These choppers lead to rotas.

Keywords : converter DC-DC entrelaced□□□, photovoltaic generators, IGBT, optimisation
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