

Design and Implementation of DC-DC Converter with Inc-Cond Algorithm

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Abstract : The most important component affecting the efficiency of photovoltaic power systems are solar panels. Efficiency of these systems are significantly affected because of being low efficiency of solar panel. Therefore, solar panels should be operated under maximum power point conditions through a power converter. In this study, design boost converter with maximum power point tracking (MPPT) operation has been designed and performed with Incremental Conductance (Inc-Cond) algorithm by using direct duty control. Furthermore, it is shown that performance of boost converter with MPPT operation fails under low load resistance connection.

Keywords : boost converter, incremental conductance (Inc-Cond), MPPT, solar panel

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