

SELECTION OF MOTOR AND DESIGN OF CONVERTER FOR THE ELECTRIC VEHICLE

Mr Junish Ezra P, Mr K. Sanjay Kathiresan
EEE Department, St. Joseph's Institute of Technology, India

Mr R. Manivannan
Associate Professor, EEE Department
St. Joseph's Institute of Technology, Chennai, India

Motor and converter design choices for electric vehicles are described in this paper. In searching more we choose Brush-less dc motor works well for these applications. Since BLDC motor has high starting torque and high efficiency with low maintenance due to the presence of electronic switching this motor is more suitable for high power density systems. A suitable and compact DC-DC converter plays an important role in the auxiliary power module in electric vehicles and other applications. Many existing multi-port transformers have certain limitations related to duty ratio and inductor charging current, respectively. The operating modes of the converter are simple without any of the duty ratio and any inductive interference with charging current. Both motor (BLDC) and converters (DC-DC) play an important role in electric vehicle performance. The final results from the simulation part of the transformation have been verified experimentally and the simulation text is on the next page.