

TORQUE CONTROL OF BRUSHLESS DC (BLDC) MOTOR DRIVE BASED ON DSP TECHONOLGY

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Abstract

Brushless DC (BLDC) motor is getting more attention due to its high efficiency, good performance and ease of control for many applications. This paper include title design and implementation of a torque controller for a BLDC motor drive using digital signal processor (DSP) & based on Intelligent Power Module (IPM) at first, a theoretical analysis of a BLDC motor drive is presented and the validity of the proposed analysis is verified via simulation. The torque is controlled via current regulation directly. Then, hardware and software details of the system are explored. It can be used to analyze the equivalent (von-mises) stresses& the thermal stresses at disc to pad interface

Keywords : Brushless motor, BLDC, torque controller, intelligent power module DSP control board