

## 新型吊扇之無刷馬達開發與測試

### **Development of New Structure of Brushless DC Servo Motor for Ceiling Fan**

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#### Abstract

This paper proposes the improvements of the new structure of a brushless DC servo motor (BLDCM) for the ceiling fan. The new type ceiling fan is first designed by using the brushless DC servo motor theory and the six-step wave form for the purpose of the manufacture cost reduction. The energy also can be saved at least 55% when the new type motor is compared to the traditional fan based on the induction motor. The new brushless DC servo motor is required to meet both of the basic ceiling fan control and the cost reduction.

Key words : Brushless DC servo motor (BLDCM); Brushless motor;

Ceiling fan; Hall sensor; Speed controller