

## **Design of a Duty Boundary Condition Boost Converter for Improving Wind Power Conversion Efficiency**

Yang, Chung-Ming ; Chu, Neng-Yi; Chen, Liang-Rui

### **Abstract**

A high efficiency wind power converter, mainly constructed by the proposed duty boundary condition boost converter (DBC-BC) is proposed in this paper. It can work in the high efficiency duty cycle to effectively increase the efficiency of wind power converter. A 3kW prototype is designed and implemented to assess the performance of the proposed DBCBC. Experimental results show that a wind power converter with high efficiency 95% can be obtained by using the proposed DBC-BC.

Key words : Duty Boundary Condition;Boost Converters;High Efficiency