

## IGBT의 열 특성에 관한 연구

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### Study on Thermal Characteristics of IGBT

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**Abstract** : In this paper, we proposed 2500V Non punch-through(NPT) Insulated gate bipolar transistor(IGBT) for high voltage industry application. we carried out optimal simulation for high efficiency of 2500V NPT IGBT according to size of device. In results, we obtained design parameter with 375um n-drift thickness, 15um gate length, and 8um emitter windows. After we simulate with optimal parameter, we obtained 2840V breakdown voltage and 3.4V Vce,sat. These design and process parameter will be used designing of more 2000V NPT IGBT devices.

**Key Words** : Insulated Gate Bipolar Transistor, Breakdown Voltage, On Resistance, Thermal analysis