



# Bachelor Thesis

## Analysis and Comparison of Cooling Methods for State of the Art Switching Devices (Si, SiC, GaN)

### Description

In recent decades, power conversion is demanding for higher efficiency and power density, to achieve this the frequency is usually increased and this creates a challenge to dissipate the losses in switching devices. The scope of this thesis work is to analyze and compare the different cooling methods to test the limits of heat dissipation for devices to achieve a high power density with low operating temperature.

### Work

- Preparation: literature research, elaboration of possible prototypes
- Execution: Calculation, simulation, design, test setup
- Documentation

### Requirement

- General interest in the topic
- Motivation
- Knowledge in power electronics and heat transfer
- English required

### General conditions

- Location: Office and laboratory at the institute
- Start: immediately possible
- Employment on a marginal basis

### Kontakt

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