



Bachelor/master/diploma thesis: Simulation of a Mosfets model in case of a short circuit with verification in tests

Smart Battery Solutions GmbH is an innovative company with headquarters in Kleinostheim. We develop and produce intelligent accumulator systems for many applications such as emergency systems, cordless screwdrivers, medical technology, e-bikes or even electric vehicles. Many years of experience, reliability and flexibility are among our strengths. Our experienced and motivated team guarantees us a decisive advantage over our competitors. Decide for us and be part of our common success. Translated with

TOPIC DESCRIPTION:

Intelligent battery management systems (short: BMS) are part of a battery system. One of the main tasks of the BMS is the detection and shutdown of critical states, such as a short circuit. In this process, currents flow for a short time that are many times higher than the nominal current and represent an enormous load for the power electronic components. In the thesis to be prepared, a Mosfet model is to be created using a simulation tool to simulate the load in the event of a short circuit. Furthermore, the model has to be adapted to different Mosfet types. After the evaluation of the model, the results are simulated under real conditions and finally verified. Translated with

This includes the following work packages:

- Familiarization with simulation tool
- Creation of a Mosfets model based on data sheet information
- Implementation of different types of Mosfet
- Evaluation of the model
- Simulation of different load profiles
- Verification of the model under real conditions

REQUIREMENTS:

You are enrolled as a student in the Faculty of Engineering and ideally you are completing a degree in Electrical Engineering or equivalent. You have passed the basic studies and have all the necessary requirements for the approval of a thesis.

If you have any further questions, Mr. Lieb is at your disposal under the following telephone number 06027/9908133.

We could arouse your interest? Then we are looking forward to your application.