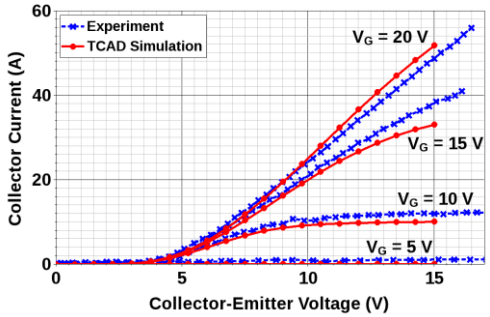
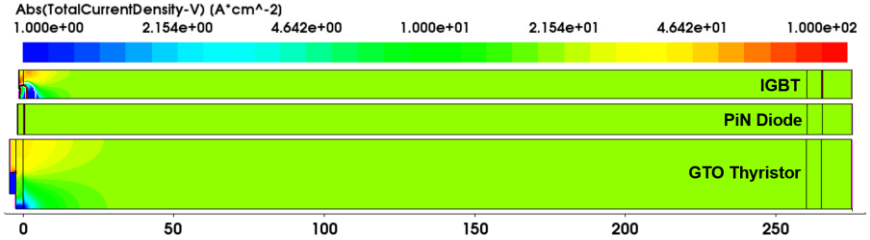
High-Voltage SiC Devices and their Commutation

PhD student: Daniel Johannesson
Funding: SweGRIDS, Hitachi ABB Power Grids
Period: 2015 - 2021

Objectives

- Investigate the performance, limitations and requirements associated with high voltage (>10 kV) SiC devices for high power applications.





Selected publications

- D. Johannesson et al., “Static and Dynamic Performance Prediction of Ultrahigh-Voltage Silicon Carbide Insulated-Gate Bipolar Transistors”, IEEE Transactions on Power Electronics, Early Access Article, Sep. 2020.
- D. Johannesson et al., “Potential of Ultra-High Voltage Silicon Carbide Semiconductor Devices”, Proc. IEEE 4th Workshop on Wide Bandgap Power Devices Applications (WiPDA), pp. 253-258, 2016.