NC State University

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Membership Level (Full)

Project Title: Switching and Dynamic Ruggedness Characterization of Gen3 10kV/300mOhm SiC MOSFETs
Objectives: Dynamic switching, short circuit and avalanche characterization of latest generation of 10 kV SiC MOSFETs
Major Milestones: Short circuit and avalanche test of 10 kV SiC MOSFETs
Deliverables: Report on dynamic ruggedness of 10 kV SiC MOSFETs

SOPO Task No.: BP5-2.3
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WBG Technology Impact

- Establishes ruggedness of latest generation of CREE 10 kV SiC MOSFETs
- Short circuit characteristics provide the design requirements to the gate drive designer
- Reliability of medium voltage converters enabled by 10 kV SiC MOSFETs

More WBG Impact and Additional impacts

- Improved gate driver design with fast short circuit protection of 10 kV SiC MOSFETs
- Efficient medium voltage converters enabled by 10 kC SiC MOSFETs