

Project Title: Commercialization of 1MW SiC Devices Based High Speed Medium Voltage Motor Drive with Redundant Operation

Objectives: Commercialize SiC based MVD system with three critical functions: 1) fault-tolerance operation, 2) high-speed operation, and 3) filter-less long-cable operation.

Task No. BP5-4.3b

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WBG Technology Impact

1. Improvement over silicon, or conventional approaches: efficiency increased to 98~99%, weight reduced to almost half and system level costed is reduced.
2. Application: Medium Voltage Motor Drive
3. Timeframe for commercialization: Commercialize it in 2-3 years.
4. Power losses are less than 35% compared with Si based Solutions.

Accomplishments/Outcomes

The expected outcome of this project is development and testing of a 1MW SiC based Medium Voltage Drive system with three critical functions: 1) fault-tolerance operation, 2) high-speed operation, and 3) filter-less long-cable operation.