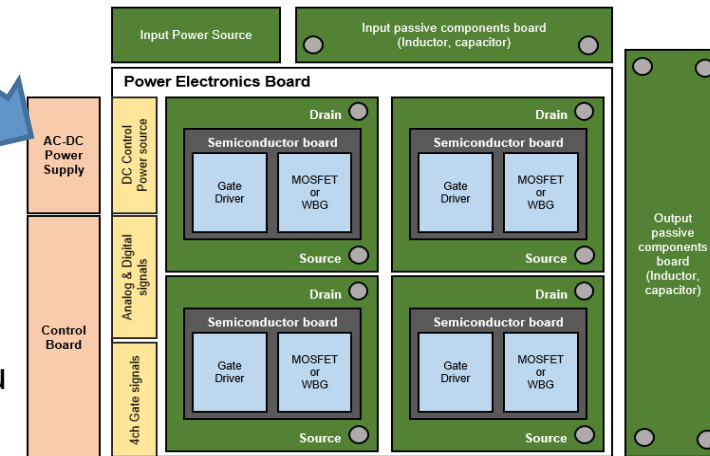
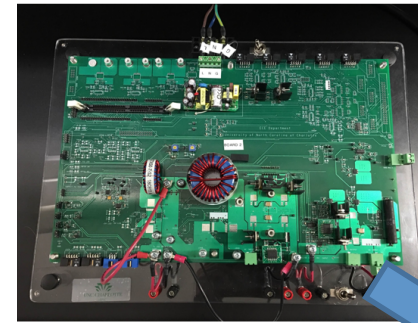


- Project Title: Power Electronics Teaching Lab
Incorporating WBG Semiconductor Switches and Circuits
- Objectives: 1) Modular multi-function educational high frequency power electronics board with plug and play capability, 2) Students hands-on experience using WBG semiconductor devices in power electronics circuits
- Major Milestones: Course Design and Plan (1/4), Lab Development (2/4), and Lab Session and feedback (1/4)
- Deliverables: Course plan, two Educational boards tested with at least three different power devices and two magnetic cores, lab manuals, final report incorporating the feedback received by the class



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WBG Technology Impact

1. Fast switching operation & low switching loss
→ enabling more compact & efficient system
2. High voltage operation with smaller packaging
→ more compact & reliable system
3. High temperature operation (Harsh conditions)
→ more compact & reliable system

Additional impacts

1. Flexibility to perform different power electronics lab sessions
2. Training undergraduate students as WBG power electronics engineers
3. Improvement of getting a job opportunity for students by having hands-on experience and practical knowledge of WBG semiconductors in power electronics applications.