

Design and Prototyping of SiC Power Electronics

Aegis Technology provides customized design and prototyping of the following SiC power electronics products.

Packaged SiC Switches

- Single switch or arrays of switches mounted on aluminum nitride (AlN) or silicon nitride (Si_3N_4) substrates with copper (Cu), gold (Au), or molybdenum (Mo) metallization

SiC Power Modules

Power modules are the key subsystems of a variety of power conversion systems

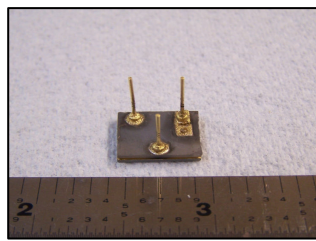
- Robust designs with single-phase, three-phase, half-bridge, and full-bridge configurations
- Six-pack power modules comprising of alumina (Al_2O_3) and aluminum nitride (AlN) with Cu metallization.
- Half-bridge power modules comprising of alumina (Al_2O_3), aluminum nitride (AlN) or silicon nitride (Si_3N_4) substrates with copper (Cu), gold (Au), and molybdenum (Mo) metallization
- Power ratings: 1 kW to 100 kW

SiC DC-AC Inverters and DC-DC Converters

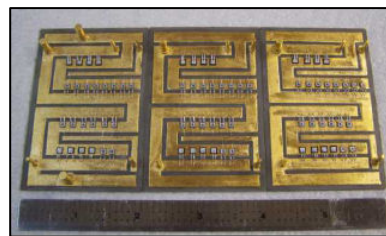
- SiC-based and SiC/Si hybrid DC-AC inverters and DC-DC converters which integrate SiC power modules, high-temperature packaging, high-efficiency heatsinks, and gate drivers suitable for SiC devices
- Power ratings: 1 kW to 100 kW

SiC Gate Drivers

- High temperature capable and high frequency capable gate drivers for SiC power devices



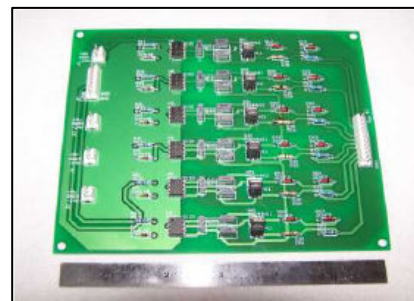
a)



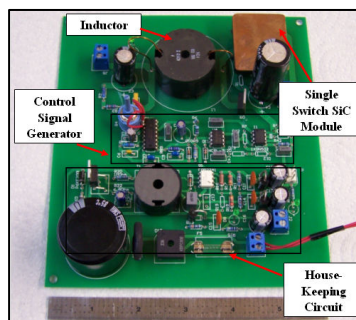
b)



c)



d)



e)

a) SiC switch packaged on a AlN substrate, b) 6-pack SiC power modules, c) 5 kVA DC-AC SiC inverter, d) Gate driver for SiC inverter, e) SiC DC-DC converter

For more information, contact: Dr. Timothy Lin, Technical Director, Aegis Technology Inc., (714) 554-5511, timlin@aegistech.net, www.aegistech.net