



Method And Apparatus For Integrating Current Sensors In A Power Semiconductor Module

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The Invention

An improved system for measuring current within a power semiconductor module is disclosed, where the system is integrated within the power module. The system includes a point field detector sensing a magnetic field resulting from current flowing in one phase of the module. A lead frame conductor may be provided to shape the magnetic field and minimize the influence of cross-coupled magnetic fields from currents conducted in other power semiconductor devices within one phase of the module. Optionally, a second point field detector may be provided at a second location within the module to sense a magnetic field resulting from the current flowing in the same phase of the module. Each phase of the power module includes at least one point field detector. A decoupling circuit is provided to decouple multiple currents flowing within the same phase or to decouple currents flowing within different phases of the power module.

Tech Fields

- [Engineering : Electric machines](#)
- [Engineering : Engine technologies](#)

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