

Power Electronics Engineer

Location: 97 Highbury Road, Burwood VIC 3125, Australia

About Rectifier Technologies

Rectifier Technologies is an Australian designer and manufacturer of advanced power-conversion systems for EV charging, energy storage, data centres, telecommunications, defence and industrial applications.

With more than 30 years of experience, we develop medium- and high-power AC/DC and DC/DC technologies for global markets.

About the Role

We are seeking a hands-on, mid-level Power Electronics Engineer to join our R&D team. The role focuses on circuit design, schematic capture, PCB layout, prototyping, testing and troubleshooting of power-conversion products. The successful candidate will have practical experience designing reliable PCBs for high-voltage, high-current and high-frequency applications. Mechanical design experience would be an advantage.

Key Responsibilities

- Design AC/DC, DC/DC and PFC power-conversion circuits.
- Develop schematics and multilayer PCB layouts using Altium Designer.
- Optimise PCB designs for high voltage, high current, thermal performance and EMC.
- Apply appropriate creepage, clearance, grounding and isolation requirements.
- Select components and perform circuit calculations, simulation and design verification.
- Support the design of power stages, gate drives, sensing, control and protection circuits.
- Coordinate PCB fabrication, prototype assembly and component sourcing.
- Conduct prototype power-up, testing, debugging and root-cause analysis.
- Prepare design documentation, bills of materials and manufacturing files.
- Support EMC, electrical-safety, certification and production-release activities.
- Work with senior engineers, manufacturing, quality and suppliers.

Essential Skills and Experience

- Approximately 3–7 years' experience in power-electronics or electronic-product design.
- Experience developing AC/DC, DC/DC, PFC or switched-mode power supplies.
- Strong hands-on experience with Altium Designer.
- Proven experience taking PCB designs from schematic capture to production-ready files.
- Experience designing multilayer PCBs with power, analogue, digital and communication circuits.
- Good understanding of high-current layout, switching loops, grounding, isolation, thermal management and EMC.
- Knowledge of creepage, clearance and electrical-safety requirements.
- Experience with power semiconductors, gate drives, magnetics, sensing and protection circuits.
- Practical laboratory experience with oscilloscopes, current probes, power analysers and electronic loads.
- Experience in prototype testing, troubleshooting and design verification.

- Understanding of Design for Manufacturing and Design for Test principles.

Desirable Experience

- Medium- or high-power systems above 10 kW.
- Three-phase power systems and resonant converters.
- EV chargers, battery energy storage or data centre power systems.
- High-voltage DC or 800 V architectures.
- Silicon Carbide power devices.
- PSIM, LTspice or similar simulation tools.
- Embedded C, DSP or microcontroller-based digital control.
- CAN, Modbus or Ethernet communications.
- EMC and electrical-safety certification.

Qualifications

- Bachelor's degree in Electrical Engineering, Electronic Engineering, Power Electronics or an equivalent discipline.

Eligibility

Applicants must hold Australian citizenship or permanent residency with unrestricted working rights.

Why Join Rectifier Technologies?

- Work on advanced EV charging, energy storage and data centre power technologies.
- Take PCB designs from concept through to commercial production.
- Gain hands-on experience with high-power, SiC and HVDC technologies.
- Work within an experienced and collaborative engineering team.
- Receive a competitive salary package and long-term career-development opportunities.

To Apply:

Please submit your resume to email: jobs@rtl-corp.com