



ELECTRICAL ENGINEER

OVERVIEW:

Design, develop, and test power electronic systems used in an electric motor propulsion system. Design analog and digital circuits used for control of digital microprocessor or micro-controller based propulsion systems.

QUALIFICATIONS AND KNOWLEDGE:

- Requires a bachelor's degree or higher in Electrical Engineering with a strong focus in hardware design of power electronics, electric motor drives, and controller systems
- 7-10 years of experience in the field or in a related area
- 3-5 years direct experience with solid state inverter design for +10kW 3-phase AC machines
- Working knowledge of classic control theory applied to variable speed electric motor drives
- Experience in working with MOSFETs, IGBT, isolation circuits, snubber circuits, shielding techniques, and minimizing parasitic in power circuits
- Experience in the design and development of high power solid state switching circuits
- A working knowledge of IPC and other electronic industry standards
- Electric or Hybrid Electric Vehicle engineering experience a plus
- Understanding of Lithium based energy storage systems for propulsion applications a plus
- Display basic familiarity with digital electronics and communication protocols, i.e. CAN, RS232
- Knowledge and experience of high current draw power supplies and battery charging design
- Magnetic component design experience and knowledge of electromagnetic theory behind the operation of electric machines.
- Proven ability to meet tight deadlines, work under pressure, and to get things done

ESSENTIAL DUTIES AND RESPONSIBILITIES:

- Design, develop, and integrate batteries, battery chargers, and electric motor inverters for +10Kw propulsion applications.
- Create printed circuit board schematics and designs with isolation, EMI management, grounding, and conductive or convective heat dissipation considered.
- Create complete BOMs and provide oversight and sign-off of PCB layouts
- Participation in complete system integration of power systems with motor controller and electronics.
- Responsible for generating specifications and review of 3rd party vendor subsystem designs.
- Develop documentation including bills of materials, test and validation procedures, and component analysis.
- Test and debugging at board, component, subsystem and fully integrated system levels.
- Support enclosure design for motors, motor controller (power and control stage), and batteries.
- Ensure design is in compliance of specifications, industry standards, and customer requirements.
- Prepare and study technical drawings and specifications of electrical systems to ensure that installation and operations conform to standards and customer requirements.
- Inspect completed installations and observe operations, to ensure conformance to design and equipment specifications and compliance with operational and safety standards.
- Investigate and test vendors' and competitors' products.

LOCATION:



ELECTRICAL ENGINEER

Austin, Texas

Local candidates preferred

No relocation or visa sponsorship is available

USE JOB REFERENCE CODE

MEE-KLD120110