

ELECTRICAL DESIGN ENGINEER

Reports To: Engineering Manager

JOB SUMMARY: Responsible for research or development work, solution of problems, design and testing of new products, components and systems involving the application of electric and electronic principles to increase the production quality, efficiency or volume of Company's products.

ESSENTIAL DUTIES AND RESPONSIBILITIES:

Analyze field failures and manufacturing problems, suggest and implement improvements to correct design or process deficiencies that affect quality, cost and customer experience.

Plant-wide support of electronics engineering and assisting manufacturing team with technical questions and issue resolution.

Support existing products including update of components due to life curves or system upgrades

Modifying and providing drawings to other departments (AutoCAD, PCAD, etc.)

Design hardware, software and layout circuit boards for new and sustaining projects

Recommend and implement cost savings measures for designs and processes

Handle engineering changes for new and existing designs

Suggest creative improvements to new and existing products

Complete circuit simulations, schematic capture, component selection, prototype builds and testing, circuit board layouts, worst case tolerance analysis, failure modes and effects analysis, verification and validation test plans and testing.

Work with other engineers and disciplines to ensure successful integration of design into product and into manufacturing.

Participate in the system level design of new products to assure testability and component selection is compatible with processes.

Design, build and implement automated calibration and test equipment

Develop control plans (in-process and at receiving) and work instructions to effectively monitor and control the quality at the assembly level

Troubleshoot quality problems for internal and external customers.
Assist with supplier development in the electronics area

Develop testing and inspection parameters to insure a high level of quality control at the assembly level (gauging, test equipment, error proofing)

Accurate product specifications and delivery dates.

Other related duties as may be assigned.

EDUCATION AND EXPERIENCE:

Bachelor's Degree in Electrical Engineering or Electronics Engineering and 5 years experience in electrical/ electronic engineering applications (manufacturing).

QUALIFICATIONS:

Comprehensive knowledge of analog and digital circuit design

Experience with:

- PCB layout software (Altium Designer or PCAD preferred)

- Surface-mount components and assemblies

- Circuit board layout and assembly

- Bench testing and troubleshooting

- CAN based products

- Designing to meet EMC requirements, susceptibility and immunity

- Analog simulation skills with SPICE based tools

- Designs including Digital Signal Processors

- Magnetics design

- Problem-solving tools such as 8D, 5-Whys, CEDAC and DMAIC

OTHER KNOWLEDGE, SKILLS & ABILITIES:

- Ability to read and understand schematics

- Disciplined and logical thinking, testing, and documentation skills

- Ability to diagnose and repair electronic manufacturing test equipment

- Experience with ICT equipment

- Proficient computer skills

- Excellent organizational skills and the ability to multi-task and balance priorities

- Ability to work cooperatively in a team environment across all functions of the business

- Self-motivated team player with a sense of urgency

- Excellent inter-personal and communication skills

- Knowledge of Cost of Quality

- Follows established methods and processes including safety and security procedures

- Supports Company goals and objectives

PHYSICAL DEMANDS:

Employee is regularly required to sit, stand and walk, use hands and fingers, talk and hear. The employee will occasionally be required to bend and reach with hands and arms. Specific vision abilities required by this job include close vision, color vision, depth perception, and the ability to focus.

WORK ENVIRONMENT:

This position is in an office setting with standard office lighting, equipment and a quiet noise level.