

## OK International Job Description Form

<b>Division/Department:</b>	<b>ENGINEERING</b>
<b>Location:</b>	<b>CYPRESS</b>
<b>Job Title:</b>	<b>ENGINEER, ELECTRICAL</b>
<b>Reports to:</b>	<b>DIRECTOR OF ENGINEERING</b>

<b>Level/Grade:</b> <b>N/A</b>	<b>Type of position:</b> <b>FULL-TIME</b>	<b>Hours</b> <u>40</u> <b>/ week</b> <b>EXEMPT</b>
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### JOB SUMMARY:

The electrical engineer will participate in projects involving state of the art soldering and rework systems in conduction and convection technologies, and fluid dispensing systems. The job requires experience in developing and providing sustaining engineering support for products that contain digital and analog circuits, DC and RF power supplies, microcontroller based circuits, optical, electromechanical and motion control subsystems.

### JOB DUTIES

- Responsible for the design and development of new products based on performance specifications. Receives project assignments, clarifies ambiguous specifications and establishes design parameters. Designs products for quality, manufacturability, testability, and cost.
- Coordinate the construction and evaluation of prototype units. Monitors and drives the project (product development) and consults with support personnel to insure attainment of design objectives, approved costs and schedules. Prepares and submit periodic status reports.
- Writes specifications and documentation for component procurement, product assembly and test instruction. Documents technical conclusions and project closure reports. May originate test instrumentation.
- The job requires experience in developing products that contain mechanical and electromechanical parts, components and devices.
- Confer with engineers, customers, and others to discuss existing or potential engineering projects and products.
- Design, implement, maintain, and improve equipment, components, products, and systems.
- Coordinate manufacturing, maintenance, support, documentation, and testing activities to ensure compliance with specifications and customer requirements.
- Perform detailed calculations to compute and establish manufacturing test standards and specifications.
- Circuit design using both analog and digital electronics utilizing embedded microprocessors/controllers.
- Familiarity with embedded processor/controller programming. Ability to generate pseudo-code for direct translation into microcontrollers. Ability to program in C a plus.
- Investigate and test vendors' and competitors' products.

- Compile data and write reports regarding existing and potential engineering studies and projects.
- Refine the conceptual designs into functional circuits using industry standards and engineering principals of component selection, derating guidelines and stress analysis.
- Coordinate with marketing, technical services & customers, to conduct alpha test (design validation), and beta test (production validation).
- Directly perform circuit designs, schematic capture, and PCB layouts.
- Prepare test procedures to be used during manufacturing processes.
- Work closely with PCBA supplier for review and establishment of in-circuit and functional testing requirements.
- Support existing products for sustaining engineering activities, root cause failure analysis of field returns, design modifications, engineering change review, and drawing releases.

#### **WORK EXPERIENCE REQUIREMENTS**

5 years of active experience with electronics design; analog circuitry, power supplies, digital circuitry and embedded microprocessors/controllers. Experience with PCB design. Experience with OrCAD schematic capture and Cadence PCB editor preferred. Experience with 3D solid modeling a plus. Strong analytic background with detailed understanding of analog control circuit design, digital control circuits. Must possess strong communication, interpersonal, organizational and teamwork skills.

#### **SKILLS REQUIRED**

##### **Technical Skills**

- Proven track record of new product development
- Strong analytical and logical problem solving skills
- Experience with PCB design
- Must be able to perform or direct PCB layout and have excellent understanding of PCB design for manufacturability and EMI/EMC compliance.
- Familiarity with RF power amplifier design (low MHz range) a plus
- Experience with temperature control using IR, RTD, and TC sensor feedback circuitry
- Experience with power supply designs
- Analyzing information
- Electronic circuit design
- Debugging of prototypes
- Failure analysis for production support and for field returns
- Analog and digital circuit design
- Control loop theory
- Understanding of analog and digital PID loop control
- Ability to perform moderately to highly complex discrete analog designs with good understanding of noise, ac response, and precision DC characteristics
- Equipment motion control and stabilization
- Ability to read, analyze and interpret technical publications, professional journals and governmental regulations
- Experience with temperature control, position control, dispensing control
- Experience with and understanding of EMI/EMC, TUV/CE/UL requirements

##### **Other**

- Sound judgment
- Strong communication skills
- High level of creativity and inventiveness

- Ability to work in both a team and as an individual, under time pressures
- Interaction/synergies available between electronics, software and mechanics
- Magnetic materials understanding a plus
- Motion control development and implementation
- Must be energetic, independent and self-motivated.
- Ability to travel locally and internationally when required

#### **EDUCATION REQUIREMENTS**

College graduate with BS degree in Electrical Engineering. Master's degree a plus.

#### **ESSENTIAL PHYSICAL JOB REQUIREMENTS/WORKING CONDITIONS:**

<b>RARLEY (1-10%)</b>	<b>OCCASSIONALLY (11-33%)</b>	<b>FREQUENTLY (34-66%)</b>	<b>CONTINUOUSLY (67%+)</b>
Sitting:	Continuously	Kneeling:	Rarley
Standing:	Frequently	Climbing:	Rarley
Bending:	Occasionally	Reaching:	Occasionally
Lifting:	Occasionally	Grasping/Handling:	Occasionally
Turning/Twisting:	Rarley	Squatting:	Rarley

#### **FOR HR USE ONLY**

EEO Job Category/Group:	Revision #:	Date:
Department Manager:	Title:	
Next Level Manager:	Title:	