SEMICONDUCTOR TEST ENGINEER

Summary

Accomplished in running complex engineering tasks by identifying and solving non-standard engineering problems to develop and improve the manufacturing process. Good background in circuit theory, including analog, digital, and high frequency circuits. Strong analysis and problem solving ability. Hands on developer of ATE test programs for engineering and production testing, working closely with define for testability (DFT) and production engineers in the development of test programs. Uniquely qualified leader with a solid foundation in circuit design, schematic design, PCB layout, C/C++ programing, and experience in semi-conductor devices testing strategies.

Highlights

- RF Test Solutions
- Test Solution Optimization
- RF Board Troubleshooting
- RF Test Jig Design
- Testability Design
- Semi-conductor Testing
- Test Pattern Generation
- Test Equipment Operation
- Automatic Test Equipment (ATE)
- Acceptance Test Protocols
- Analog / Digital Circuit Design
- Digital / High Frequency Circuits
- RF Engineering Principles
- Project Management
- System Performance Criteria
- Antenna Design

Accomplishments

- Assisted project teams by leading the engineering and design for electrical hardware, test code development and implementation for a multi-million dollar initial and final test project for three different accelerometers.
- Reduced production time and cost by designing automated test jigs to ensure defect-free production.
- Helped to reduce testing time significantly and increased the testing of multiple devices from four up to 32 in some cases.
- Developed the test application for a power metal oxide semiconductor field-effect transistor (MOSFET) to handle up to 1200V and 30A power levels.
- Designed electrical hardware, developed test code and verified production for KLA-Tencor's high speed clock driver (100MHz), Amphenol's pressure sensor - transmission control module, and Microchip's Smoke detector(RE 46C141) and PWM micro controllers (MCP19114/15).

Experience

Semiconductor Test Engineer 05/2012 to Current Borgwarner Inc. Auburn Hills , MI

- Build hardware/software prototypes to verify new product testability.
- Design test Jigs for the load board, DUT board and socket board and create schematics.
- Develop automated test equipment software and hardware including test plan, test hardware and software debugging, characterization and test package release.
- Design printed circuit boards (PCBs) by developing the product concept and design features, circuit interconnection, placement, and dimensions.
- Generate the bill of materials (BOM) by choosing electrically satisfactory components and kept the BOM up-to-date with the schematic.
- Develop test programs and fixtures for semiconductor devices including micro-controllers, power MOSFETs and micro-electro-mechanical systems.
- Implement and supervise test system components including debugging, certification, optimization, and reduction of test time.
- Deliver technical training to customers for SPEA's ATE.

Junior Test Engineer 06/2011 to 04/2012 Saic Quantico , VA

- Applied knowledge of quality assurance systems and methods, use of debugging tools, and manual tests tools to test and troubleshoot telecommunications equipment for cellular use.
- Wrote and implemented test plans and scripts and performed system level RF testing on microwave packet radios and microwave digital radio.
- Assisted project teams by assuring compliance with scopes, processes, procedures, and test plans.
- Executed testing and troubleshooting for radios, RF Filters and waveguide using RF power meter, spectrum analyzer, DS signal generator, and frequency counter.
- Modified, upgraded and verified high power OUD's (outdoor units).
- Tested, diagnosed and repaired systems and modules to the component level.

Graduate Teaching Assistant 08/2010 to 05/2011 Metropolitan State University Of Denver Denver , CO

- Served as a laboratory teaching instructor.
- Graded student assignments, reports, and examinations.
- Met with and tutored students, prepared instructional materials, and conducted lab sessions on analog and digital circuit analysis.

Shift Supervisor 02/2009 to 08/2010 Raising Cane's Kearney , NE

- Directed and supervised crew in customer service and stock operations.
- Managed customer relations and resolved problems in accordance with company policy and guidelines.
- Executed and documented: cash/check pulls, deposits, returned check payments, check acceptance, refunds, voids, discounts, cashier verifications, and ranchers.
- Trained, developed and evaluated hourly non-exempt employees.

Maintenance Engineer 09/2006 to 09/2008 Common Spirit Norwalk , IA

- Implemented ISO 2000:9001 quality management systems, business processes, re-engineering, and computerized maintenance,
- Developed equipment history card, data analysis, and rehabilitation proposals.
- Created spare parts list, technical specifications, and performed evaluations.

Education
Master of Science : Electrical Engineering 2013 University of Texas at Tyler City , State , USA GPA: GPA: 3.69
Bachelor of Science : Electrical Engineering 2006 Jimma University City , Ethiopia GPA: GPA: 3.8
Skills

- **Software:** OrCad/OrCad PCB Editor, Matlab, EMPro/ADS, and LabVIEW
- **Programming Languages** : C++/C, Java, Visual basic and VDHL
- **Certification:** OrCAD Advanced PCB Editing