

Brooklyn Ballard

SOC Product Engineer

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SUMMARY

Accomplished SOC Product Engineer with over 6 years in semiconductor testing combined with a strong foundation in electrical engineering. Demonstrated ability to define and implement effective testing strategies for advanced system-on-chips. Proven track record of collaborating with cross-functional teams, including foundries and design units, to troubleshoot silicon issues and implement corrective measures. Keen understanding of Design of Experiments (DOEs) that lead to improved yield and consistency across production flows. Passionate about innovation, always looking for new ways to enhance testing protocols while meeting performance benchmarks.

EXPERIENCE

Senior SOC Product Engineer

Silicon Solutions Group | January 2020 - Present | Seattle, WA

Lead SOC product development through effective testing methodologies and collaborative strategies tailored to ensure quality and performance. Engage in extensive data analysis to support improvement initiatives aimed at enhancing product output during the qualification phases.

- Developed and implemented testing protocols for advanced SOC's with design and manufacturing teams.
- Analyzed yield and performance data driving continuous improvement across testing life cycles.
- Collaborated with foundry partners troubleshooting and resolving silicon issues effectively.
- Established relationships with key stakeholders facilitating smoother product introduction procedures.

SOC Test Engineer

NextGen Technologies | June 2017 - December 2019 | Boston, MA

Focused on structural and functional tests, providing insights based on quantitative data for SOC products. Enhanced testing workflows leading to significant quality improvements and defect rate reductions.

- Executed various tests using Advantest 93K systems improving efficiency.
- Partnered with multidisciplinary teams on refining testing methodologies.
- Conducted statistical analyses validating testing outcomes and processes.
- Supported the transition from test phases to high-volume production effectively.

Junior Test Engineer

Innovative Chipworks | August 2015 - May 2017 | Austin, TX

Assisted in executing crucial test protocols on semiconductor devices while collaborating closely with seasoned engineers. Fostered an environment aimed at rapid turnaround of project timelines.

- Helped develop initial test plans and executed projects within time constraints.
- Analyzed test results compiling recommendations for improvements.
- Contributed significantly to teamwork efforts resulting in enhanced visibility of testing metrics.
- Engaged in direct communication with senior engineers ensuring alignment on project objectives.

LEADERSHIP & AWARDS

- Certified Semiconductor Test Engineer (CSTE) - 2019
- Best Innovation Award at Silicon Solutions Group - 2021

EDUCATION

Bachelor's Degree in Electrical Engineering

Georgia Institute of Technology | GPA: 3.8 | 2015 | Atlanta, GA

Coursework: Circuit Analysis, Digital Systems, Microprocessors, Semiconductor Devices

CERTIFICATIONS

- Certified Semiconductor Test Engineer (CSTE) | 2019
- Project Management Professional (PMP) | 2021

TECHNICAL SKILLS

- **Testing Tools:** Advantest 93K, Teradyne Uflex ATE, National Instruments LabVIEW
- **Programming Languages:** Python, MATLAB, C++

- **Statistical Software:** Minitab, JMP, R
- **Version Control:** Git, Subversion
- **Documentation Tools:** Microsoft Office, LaTeX, Confluence
- **Agile Methodologies:** Scrum, Kanban
- **Simulation Tools:** Cadence, ANSYS, Mentor Graphics
- **Database Management:** SQL, NoSQL, SQLite
- **Networking Tools:** Cisco IOS, Wireshark, NetSim
- **Circuit Design Software:** Altium Designer, Eagle PCB

SKILLS

- Semiconductor Testing
- Statistical Data Analysis
- Automation Scripting
- Cross-Functional Collaboration
- Yield Optimization
- Design of Experiments
- Test Methodology
- Failure Analysis
- Quality Assurance
- Process Improvement
- Technical Documentation
- Data-Driven Decision Making
- Scripting Languages
- Root Cause Analysis
- High Volume Production
- Advanced Testing Equipment

PROFESSIONAL AFFILIATIONS

- Member, IEEE (Institute of Electrical and Electronics Engineers)
- Active participant in local STEM outreach programs

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST