

Senior Power Characterization Device Engineer

Type: Full-time
Reports To: Senior Manager, Modeling and Characterization
Location: San Diego, CA

As a Senior Power Characterization Device Engineer, you will drive and support projects in power semiconductor and IC electrical characterization with major focus on electrical characterization of power semiconductor devices in a small-company, fast-moving environment. Duties will include the following:

- Drive development and implementation of equipment and software in a lab environment to characterize power semiconductor devices in an efficient manner covering performance, reliability, design rule margin analysis, and yield characterization
- Support characterization for the modeling group to create custom compact models and behavioral models for integrated BCD and UHV processes. Support the Modeling group in answering questions from Design about product behavior, driving continuous improvement of the capability of models to predict product behavior
- Coordinate with the Modeling group and Device Development group, understanding test structure layout and goals of the test structures so the characterization helps achieve those goals
- Support quick resolution of production yield or performance problems as needed
- Support device development and correlation to measured results

Acceptable candidates must be self-motivated, disciplined and able to work well in a fast-paced, multifunctional environment.

Required Skills and Experience

- M.S. or PhD in Electrical Engineering, Physics, Materials Science, Solid State Electronics, or equivalent
- Hands-on experience in electrically characterizing devices in integrated BCD processes. Experience with integrated UHV processes preferred. Experience with compound semiconductor devices is a plus
- Strong experience with power-device-specific characterization (R_{dson} , Q_g , UIS, reverse recovery, SOA, etc.) Experience with wafer probing, both with probe cards and needle probes
- Experience required in specifying and setting up equipment and software for semiconductor power device data acquisition. Experience automating data acquisition to improve efficiency is a plus. Experience with Labview or IC-CAP for data acquisition is a strong plus. Experience with automating data analysis through scripting is a plus
- Experience with test structure layout preferred
- The candidate will need to have a proactive approach to setting up data acquisition and analysis systems
- Creativity and good problem-solving and communication skills. Strong desire to get to root cause
- Ability to supervise others in data collection and work well in a team-oriented environment