

Device Characterization Engineer II

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

As a Device Characterization Engineer II, you will support the development of semiconductor technology solutions through the characterization of device and circuit structures. You will work in an engineering R&D laboratory focusing on wafer level testing of a wide variety of different semiconductor devices. You will work on both automatic and manual probe stations to acquire data. The role also includes support for the characterization of device SPICE models and involves the development of test programming and subsequent data analysis. Duties will include the following:

- DC and AC device characterization of a wide variety of semiconductor devices
 - LVMOS, LDMOS, BJT, Resistors, Capacitors, JFETs
 - Circuit Blocks (Ring Oscillators, Bandgaps, Current Mirrors)
 - Wide range of operating voltages: 1.8V -> 1000V
 - Over temperature (-40C -> 150C)
- Probe station setup and usage (Automatic and Manual)
- Use of both micro-positioners and probe cards
- Spice model characterization
- ESD TLP Characterization
- Statistical analysis of data and reports
- Interaction with other Silanna groups such as Design and Operations
- Probe Card design and working with vendors
- Support lab management, equipment maintenance, inventory, etc.

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

Qualifications and Education Requirements

- Minimum B.S. in Electrical Engineering, Physics, Materials Science, Solid State Electronics, or equivalent
- 2 years of experience in electrically characterizing semiconductor devices in integrated BCD processes. Experience with higher voltage device characterization is a plus
- Wafer probing experience required.
- Test Programming experience using LabView or other testing software is a plus
- Experience with using ICCAP for SPICE model characterization is a big plus
- Demonstrated experience in solving testing issues and developing solutions
- Have enough understanding of device physics to develop good test plans
- Creativity, good problem-solving and communication skills. Strong desire to get to root cause and to learn new skills to broaden capabilities
- Ability to work well in a team-oriented environment