

## Staff Power Characterization Engineer

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| <b>Type:</b>       | Full-time                                   |
| <b>Reports To:</b> | Senior Manager, Modeling & Characterization |
| <b>Location:</b>   | San Diego, CA                               |

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As a Staff Power Characterization 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:

- Lead and/or support development and implementation of equipment and software in a lab environment to characterize power semiconductor devices in an efficient manner
- Support characterization for the modeling group to create custom compact models and behavioral models for integrated BCD and UHV processes.
- Statistical ET characterization of large quantity of semiconductor data in support of the development of new technologies. Develop post-processing tools to facilitate analysis of data
- Coordinate with Modeling group and Device Development group, understanding test structure layout and goals of the test structures so the characterization helps achieve those goals
- Drive the development of test solutions focused on the characterization of novel power semiconductor devices pushing the envelope of product performance
- Train and mentor junior engineers and/or technicians in the Characterization group
- Drive improvements in measurement metrics related to measurement accuracy, test time, and new capabilities
- Support quick resolution of production yield or performance problems as needed

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

### QUALIFICATIONS AND EDUCATION REQUIREMENTS

- Minimum M.S. in Electrical Engineering, Physics, Materials Science, Solid State Electronics, or equivalent
- 8 years of 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 required in labs specifying and setting up equipment and software for semiconductor power device data acquisition including experience automating data acquisition to improve efficiency. Experience with Labview and/or use of Python to automate lab functions is a strong plus. Experience with device characterization using tools such as IC-CAP is also a plus.
- Strong experience with power-device-specific characterization ( $R_{dson}$ ,  $Q_g$ , UIS, reverse recovery, SOA, etc.) Strong experience with wafer probing, both with probe cards and needle probes
- Experience with test structure layout preferred
- Ability to mentor and/or manage junior engineers and technicians. Ability to work well in a team-oriented environment