**Job Title:** Microwave Semiconductor Device & Circuit Characterization Engineer

**Company Description:**

Skyworks Solutions, Inc. is empowering the wireless networking revolution, connecting virtually everyone and everything, all the time. Our highly innovative analog semiconductors are linking people, places, and things spanning a number of new and previously unimagined applications within automotive, broadband, cellular infrastructure, the connected home, industrial, medical, military, smartphone, tablet and wearable markets.

Headquartered in Woburn, Massachusetts, Skyworks is a global company with engineering, marketing, operations, sales, and service facilities located throughout Asia, Europe and North America. For more information, please visit Skyworks' website at: [www.skyworksinc.com](http://www.skyworksinc.com).

**Job Description:**

Senior/Staff Engineer with the Advanced Technology Group (ATG) who will work with product teams within Skyworks business units to advance microelectronic technologies, devices, models, and simulation/design flow methodologies. This individual will perform technical functions that support product development, characterization, prototyping, and simulation of advanced SiGe BiCMOS, SOI, and GaAS HBT technologies used in Skyworks front-end module solutions. This role requires expertise in semiconductor device physics, characterization, models, and microwave circuit theory. It is expected this individual is a hands-on self-starter and will eventually assume responsibility for leading independent development projects. As a Skyworks ATG employee you will have a unique opportunity in steering technology and laying the path to future success of the company.

**Responsibilities Include:**

- Wafer level characterization of transistors, passive components, and circuits.
- Simulation and verification of circuits and device models.
- Design and layout of test structures associated with development of advance processes and integrated circuit functions.
- Support design engineering on the use and limitations of device models.
- Perform technology evaluation and analysis.
- Assist manufacturing on product issues including functional, reliability, test, and root cause analysis.

**Skills/Qualifications (minimum):**

- Must be proficient in programming of microwave test equipment.
Experience with microwave test equipment and device characterization/de-embedding techniques, including: VNA, load-pull, spectrum analyzers, power meters, oscilloscopes, noise figure meters, VSA, modulation sources, and semi-automated wafer prober.

Proficient in the use of microwave linear and non-linear CAD tools such as ADS, Spectre, Momentum, EMX, HFSS, etc.

Must have good communication skills both verbal and writing.

Willingness to perform tasks outside normal job duties and past experience.

Skills/Qualifications (preferred):

- Demonstrated success in non-linear circuit design of linear and saturated power amplifiers
- Hands-on experience with various industry standard models such as HiCUM, PSP, and BSIM.
- Design and layout of test structures using Cadence Virtuoso in support of advanced process and circuit development.
- Experience with extracting and analyzing data to discover underlying causes of device behavior and develop creative solutions for improved device and/or processes.
- Proficient in passive component modeling using EM tools.
- Statistical data analysis and running data analysis tools

Knowledge (minimum):

- Position requires a strong background in semiconductor device physics and microwave circuit theory.
- Knowledge of BiCMOS and SOI CMOS PDK’s and custom model integration.
- Characterization techniques and modeling of SiGe HBT and SOI CMOS technologies.

Knowledge (preferred):

- Solid understanding of semiconductor device physics and process technologies.
- Relevant experience in the design of power amplifiers, low noise amplifiers and RF switches.

Tools:

Agilent ADS, Cadence Spectre, EMX, Momentum, HFSS, MATLAB, ICCAP, HPVEE, DataPower
**Education:**

M.S. in Electrical Engineering

**To Apply:**

To apply, please logon to our website [www.skyworksinc.com](http://www.skyworksinc.com), click on the “Careers” tab, and search “Microwave Semiconductor Device & Circuit Characterization Engineer” in Andover, MA or click [HERE](http://www.skyworksinc.com).