R&D Device Engineer

About GaN Systems

GaN Systems is the global leader in GaN power semiconductors with the largest portfolio of transistors that uniquely address the needs of today's most demanding industries including data center servers, renewable energy systems, automotive, industrial motors and consumer electronics.

As a market-leading innovator, GaN Systems makes possible the design of smaller, lower cost, more efficient power systems. The company's award-winning products provide system design opportunities free from the limitations of yesterday's silicon. By changing the rules of transistor performance, GaN Systems is enabling power conversion companies to revolutionize their industries and transform the world. For more information, please visit: www.gansystems.com

Job Description

The R&D Device Engineer will be a member of the team responsible for on wafer and packaged electrical device modelling, design, and characterization. This requires a solid understanding of semiconductor device physics as it relates to GaN E-HEMT power devices. Characterization duties will include but are not be limited to HVDC, AC, CV, and transient techniques interpretation and analysis. In addition, their device physics knowledge will be applied to device failure analysis activities. Other duties include modifying and troubleshooting test and characterization procedures, on-the-job technical supervision of operators, technicians and junior engineers as required.

The engineer will be responsible for the following duties:

- Characterizing of GaN HEMT power devices (HVDC, CV and AC on wafer level and packaged)

- Designing and simulating on-wafer device structures to meet performance targets.

- Interpreting physical analysis data such as SEM/TEM, thermal imaging, EDX and SIMS profiling, as part of the team to improve product reliability, performance and yield.

- Programing and automation of semi-automatic wafer probing stations and measurement test equipment for automatic data acquisition.

- Coordinating characterization data for compact device model development for circuit simulation.

- Observing behaviour of GaN HEMT devices with an aim to improving device performance.

- Documenting results in reports and slides and making presentations to peers and managers.

- Benchmarking competition products and technologies versus performance.

- Working with Product Management to assess and meet product performance requirements.

Job Requirements:

1. MS required (PhD preferred) or equivalent degree in electrical engineering or physics with knowledge of compound semiconductor materials, devices and physical analysis.

2. Minimum of 5 years experience in power device characterization.

3. Hands-on experience with parameter analyzers, CV measurement equipment, & high voltage characterization.

4. Experience using MS Office, LabView, MatLab, and programming in Python or C++.

5. Strong problem-solving skills and experience in statistical data analysis would be viewed as an asset.

6. Excellent verbal and writing skills.

7. Good knowledge and understanding of power transistor devices and materials (device physics, processing, measurements, modeling, simulation). GaN device experience, strongly preferred.

8. Familiar with TCAD simulation software, GaN experience preferred.

9. Knowledge of engineering project planning and supervising a plus.

10. Ability to work independently with minimum supervision.

GaN Systems is an exciting work environment where leading edge power semiconductor design and development requires the ability to work in a multi-tasking and diverse technical environment that will be a very rewarding experience.

Please e-mail your resume to Tracy Lamb tlamb@gansystems.com

We thank all those that are interested in this position, however only those selected for an interview will be contacted. No phone calls please.