



## **Job Opportunity – Semiconductor Device Specialist**

TransEON is an Alberta-based startup developing semiconductor products for the space and telecom industries, with R&D and manufacturing operations based in Edmonton. We work with global partners to enable cutting-edge technology including 5G, satellite communications, and imaging radar systems through innovations in microelectronics.

In order to facilitate ongoing work, we're currently seeking a Semiconductor Device Specialist to join our team on a permanent basis. The core role of this position will be to assist fabrication teams by benchmarking process R&D and improving device designs through extensive electrical characterization. In particular, candidates will leverage their deep knowledge of semiconductor materials and devices to provide targeted feedback on splits while simultaneously guiding follow-on improvements. As such, prior experience with device design and material/process considerations will be imperative. Work will be primarily hands-on in lab and cleanroom environments, led by senior technical staff. It is anticipated that the majority of work will be conducted on-site at our facilities in Edmonton, though some activities may be remote due to the ongoing COVID-19 pandemic.

### **Responsibilities**

Work items that the candidate may be directly involved with include:

- In-depth electrical characterization of semiconductor devices through DC, pulsed-mode, small-signal RF, and load-pull methods;
- Reliability testing using a number of techniques including HALT/HASS;
- Correlative failure analysis through use of metrology tools including optical microscopy, SEM/EDX, TEM, and X-ray microscopy;
- Improvement and optimization of existing device structures based on observed data;
- Participation in follow-on process experiment planning and execution; and,
- Specification, installation, and scale-up of electrical characterization infrastructure including automated test equipment (ATE) and data analysis software.

### **Minimum Qualifications**

- An MSc or PhD in electrical engineering, materials science, physics, or a related field.
- Direct, hands-on experience in advanced electrical characterization of semiconductor devices is required. Candidates must have in-depth knowledge of device physics, specifically at the intersection of fabrication and characterization.
- Deep familiarity with test hardware for DC and RF is necessary.
- Strong record-keeping, communication, and presentation skills are a must.
- Experience in III-V or wide-bandgap semiconductors would be a significant asset.
- Knowledge of scripting and test automation interfaces such as GPIB would be a plus.
- Employment will be conditional on a comprehensive reference and background check, as well as completion of requisite on-the-job safety training and protocols.

To apply, please send a copy of your resume to [careers@transeon.ca](mailto:careers@transeon.ca) and reference this posting.