Senior Applications Engineer
GaN Systems Inc. – Kanata, Ontario, Canada

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 application engineer will be responsible for applying leading edge GaN technology in existing as well as new topologies, evaluating and documenting performance, authoring application notes and white papers, meeting with customers, defining new products and promoting the benefits of GaN devices in the power electronics industry. A highly technical, lab-oriented individual who can also meet with customers is sought. GaN applications from 48V to 1200V span multiple power electronics fields including AC/DC, DC/DC SMPS, inverters & motor drives. GaN Systems offers the opportunity to be involved with the most leading-edge power semiconductor technology worldwide.

Responsibilities:

- Provide direct customer support including device selection, circuit design/troubleshooting, thermal/electrical and system solution analysis.
- Respond to technical inquiries from existing and prospective customers with proper documentation and timely feedback/analysis.
- Analyze, develop and optimize power electronics topologies and circuits that demonstrate the advantages of GaN E-HEMTs.
- Use calculation and simulation tools for application analysis and circuit concept evaluation including the switching characteristics, power loss and thermal analysis.
- Use schematic and layout tools to generate printed circuit designs
- Test, evaluate and provide feedback on state of the art GaN Systems GaN E-HEMT prototype products.
- Characterization of GaN discretes and modules to understand application-relevant static and dynamic electrical performance.
- Work with customers, marketing and product managers to define product roadmap and product enhancements.
- Prepare technical collateral including application notes, technical papers and customer presentations.
- Develop, test and document reference design, evaluation platform for GaN E-HEMT target applications.

Skills & Experience:
Required:

- Hands-on experience in AC-DC/DC-DC converters and DC-AC inverters for +10 years
- Design knowledge of power semiconductor devices including gate driver design, turn-on/off switching behavior, miller effect, circuit parasitics and loss calculation.
- Good understanding of different topologies (half/full bridge, PFC, inverter and resonant circuit such as LLC/PSFB), and power electronics control theory.
- Solid power electronics lab skills to perform and oversee laboratory prototyping and testing with experience in multi-kilowatts high power system design
- Strong written and communication skills with experience in specification creation, technical writing and customer presentation.
- Familiarity with at least one calculation/simulation and PCB design tools.
- Basic knowledge of analog and digital control circuit/programming.
- A passion for power systems, power devices and providing world-class technical support to customers.
- Work as part of a highly productive team.
- Expect 15-20% domestic and international travel.

Desired:
- Previous application experience in power semiconductor industry is preferred.
- Knowledge and design/application experience with GaN and/or SiC power device is a plus.
- Project experience with high power (5+kW) system designs including thermal solutions.
- Experience working in internal team members and external customers and partners internationally.
- An individual who desires to influence the direction of a leading emerging technology company.

Education:
BSEE, MSEE, or PhD EE

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We sincerely thank all applicants for their interest, however only qualified candidates will be contacted.

GaN Systems Inc., 1145 Innovation Dr. Kanata, ON K2K 3G8   scavanagh@gansystems.com