

Job Title: Power Conversion Electrical Engineer

DESCRIPTION:

The Power Conversion Electrical Engineer will lead the electrical design of state-of-the-art power conversion equipment. This person must possess excellent engineering and analytical skills and have a proven record of accomplishment in cost-effective, innovative design techniques using IGBT and FET switching technology for use in harsh environments. A thorough understanding of EMI issues and control loop analysis is also required. The successful candidate will meet with customers, evaluate technical alternatives and cost tradeoffs to meet the customer needs, prepare proposals and white papers for presentation to customers, and work with other engineering personnel to design and develop prototypes for demonstration when appropriate. **US Citizenship** required. Some travel is required.

EXPERIENCE:

1. Ten years of experience designing state-of-the-art power conversion equipment using IGBT and FET switching technology for Military applications or other harsh environments.
2. Candidate must possess excellent technical writing skills and be comfortable presenting technical proposals to customers and management. Candidate should have the communication skills and ability to motivate and influence individuals.
3. Candidate should have experience using industry-recognized design and modeling software to verify circuit designs.
4. A working knowledge of AC-DC and DC-AC state-of-the-art power conversion techniques for power ranges from 500Watts to 300KW or higher. Thermal management design experience using forced-air cooling techniques a must; water-cooled is a plus.
5. A thorough working knowledge of the latest control loop logic and techniques as well as performing feedback and stability analysis is required.
6. Experience with shipboard 440Vrms, 60Hz, 3-phase and 400Hz AC power systems and shipboard power interfaces is a plus. Knowledge of the various Mil-Standards that govern development, integration, and test processes such as Mil-Std-1399, Mil-Std-461, Mil-E-16400, Mil-E-917, Mil-Std-810, Mil-S-901, and Mil-Std-167 is highly desirable.
7. Candidate should be possess proficient troubleshooting and testing skills down to the component level and be able to mentor or provide guidance to Junior Engineers and Technicians.
8. Familiarity with System Engineering development processes (both functional and object-oriented methodologies) is desired.
9. Failure Modes and Effects Analysis (FMEA) design experience is highly desirable

EDUCATION:

BS in Electrical Engineering .Advanced Degree preferred

DUTIES/RESPONSIBILITIES:

- Develop the top-level power conversion system specifications
- Define and document system-level interface requirements
- Select appropriate power conversion topology and lead the core design effort
- Document system-level verification and validation criteria
- Prepare proposals, review/approve technical documentation, and ensure contract compliance
- Plans and formulates engineering program; reviews product design for compliance with engineering principles, company standards, customer contract requirements, and related specifications
- Perform other management administrative duties, as required.