

## Job Description: Senior PCB Designer (Heating Industry)

### Position Overview

The **Senior PCB Designer** will be responsible for designing, developing, and optimizing printed circuit boards (PCBs) for heating products. The candidate must have **at least 5 years of experience in PCB layout design, high-speed circuit design, signal integrity analysis, and EMI/EMC compliance**. This role requires expertise in **PCB design tools such as Altium, Eagle, OrCAD, KiCad, or similar software** and a deep understanding of **power electronics, thermal management, and industrial safety standards**.

---

## Roles & Responsibilities

### PCB Design & Development

1. **Design and develop multi-layer PCBs** for heating products, ensuring optimal performance and reliability.
2. Work on **high-speed circuit design, power electronics layouts, and thermal management strategies**.
3. Create **schematics, PCB layouts, and manufacturing files** using industry-standard design tools.
4. Optimize PCB layouts for **signal integrity, power integrity, and minimal electromagnetic interference (EMI/EMC)**.
5. Ensure **thermal efficiency** by optimizing component placement and heat dissipation.

### Simulation & Analysis

6. Conduct **circuit simulations, signal integrity, and thermal analysis** to optimize PCB designs.
7. Use **SPICE simulations and other EDA tools** to validate circuit performance before prototyping.
8. Analyze and resolve **design-related issues**, such as noise, impedance mismatching, and voltage fluctuations.

### Manufacturing & Quality Compliance

9. Work with **PCB fabrication and assembly vendors** to ensure design manufacturability (DFM/DFT).
10. Ensure **compliance with industrial safety standards** (IEC, IS, BIS, IPC, etc.).
11. Develop **Gerber files, BOM (Bill of Materials), and assembly guidelines** for production.
12. Perform **design rule checks (DRC) and electrical rule checks (ERC)** to minimize errors.

## Collaboration & Product Integration

13. Work closely with **hardware, embedded systems, and mechanical teams** to integrate PCB designs into products.
14. Assist in **hardware testing, debugging, and troubleshooting** issues in prototypes.
15. Improve designs based on **feedback from testing, manufacturing, and customer requirements**.

## Research & Innovation

16. Stay updated with **new PCB design techniques, emerging materials, and industry trends**.
  17. Explore **flexible PCBs, rigid-flex designs, and high-power PCB technologies** for next-gen heating solutions.
- 

## Educational Qualifications & Experience

- **Bachelor's Degree in Electrical & Electronics Engineering (EEE), Electronics & Communication Engineering (ECE), or Electronics & Instrumentation Engineering (EIE)**
  - **Minimum 5 years of experience in PCB design, layout optimization, and fabrication processes**
- 

## Key Skills Required

- ✓ **Expertise in PCB design software** (Altium, Eagle, OrCAD, KiCad, etc.)
  - ✓ **Strong understanding of power electronics, EMI/EMC, and signal integrity**
  - ✓ **Experience in high-speed circuit design, multi-layer PCB layouts, and thermal management**
  - ✓ **Knowledge of DFM (Design for Manufacturing) and DFT (Design for Testing) principles**
  - ✓ **Strong analytical and troubleshooting skills for PCB debugging and optimization**
  - ✓ **Ability to collaborate with cross-functional teams for product integration**
  - ✓ **Experience in certification processes and industrial safety standards (IPC, IEC, BIS, IS, etc.)**
- 

## How to Apply:

Interested candidates can submit their updated resume to [career@asvrl.com](mailto:career@asvrl.com)

