



Rantec Power Systems Inc.
Los Osos, California

Title: Printed Circuit Board Subject Matter Expert

Date: August 2026

Department: Engineering

FLSA Status: Exempt

Scope

Rantec is seeking a Printed Circuit Board SME to serve as the company's technical authority for bare printed circuit board fabrication risk. Although Rantec does not manufacture bare PCBs internally, PCB fabrication quality and supplier process control are critical to the performance and reliability of our products.

This role will report to Engineering and work closely with Strategic Sourcing, Supplier Quality, Manufacturing Engineering, Electrical Engineering, Quality Assurance, Program Management, and external PCB suppliers. The successful candidate will help ensure that PCB designs are manufacturable, supplier processes are capable, technical risks are identified early, and defective or nonconforming PCB product is prevented from entering Rantec's production flow.

This is not a purchasing role or a traditional receiving inspection role. It is a technical leadership role focused on PCB producibility, supplier capability, supplier qualification, first article readiness, change control, defect prevention, and technical problem solving.

Essential Duties and Responsibilities

Duties include, but are not limited to, the following:

- Serve as Rantec's internal subject matter expert for bare PCB fabrication technologies, supplier capabilities, fabrication risks, and industry best practices.
- Provide technical guidance on PCB stack-ups, laminate systems, copper weights, dielectric spacing, controlled impedance, via structures, surface finishes, solder mask, plating, cleanliness, high-voltage spacing, high-current design, and thermal performance.
- Establish standards for PCB fabrication drawings, fabrication notes, stack-ups, data packages, and supplier-facing requirements to ensure clarity, completeness, manufacturability, and supplier enforceability.
- Develop and maintain PCB DFX guidelines for new product development, redesign, obsolescence redesign, supplier transition, and production release, aligned with industry best practices and current supplier capabilities.
- Work with Engineering, PCB Layout, Manufacturing, Test, Quality, and Sourcing to ensure PCB designs are manufacturable, inspectable, testable, and aligned with qualified supplier capabilities.
- Partner with Strategic Sourcing and Supplier Quality to evaluate, qualify, and maintain PCB suppliers for Rantec aerospace and defense programs.
- Maintain a PCB supplier capability matrix covering supplier strengths, limitations, manufacturing locations, certifications, process capabilities, technology fit, and known risk areas.
- Support sourcing decisions by reviewing supplier capability, quotation assumptions, material substitutions, stack-up changes, inspection gaps, testing gaps, capacity concerns, and manufacturability risks.
- Lead the technical portion of PCB supplier qualification, surveillance, and triggered audits in partnership with Quality Assurance, assessing supplier controls for CAM, stack-up management, materials, lamination, drilling, plating, solder mask, surface finish, electrical test, microsection practices, final inspection, nonconforming material, and change control.

- Conduct routine risk-based PCB supplier surveillance with QA to verify that supplier processes, materials, manufacturing locations, sub-tier usage, inspection methods, test methods, and change-control practices remain stable and in control over time.
- Establish technical audit checklists, supplier surveillance cadence, and escalation criteria based on supplier criticality, process risk, defect history, program impact, and technology complexity.
- Establish the framework for first article, production-readiness, and lot-acceptance requirements for new suppliers, new part numbers, major revisions, new materials, new stack-ups, new manufacturing locations, or significant supplier process changes.
- Define criteria for when supplier data such as stack-ups, material certifications, microsection reports, impedance coupon data, electrical test reports, dimensional reports, and certificates of conformance require routine review, escalation review, or engineering disposition.
- Define risk-based incoming inspection and documentation-review requirements for PCB commodities, enabling Receiving Inspection and Quality Assurance to make consistent lot acceptance, rejection, quarantine, and escalation decisions.
- Develop best practices, templates, checklists, and quality clauses for PCB procurement, inspection, documentation review, supplier lot release, and acceptance.
- Review supplier process change notifications and determine when engineering approval, customer approval, requalification, first article, additional testing, source inspection, or supplier containment is required.
- Lead or support the technical response to significant PCB supplier escapes, including containment strategy, suspect-lot identification, root-cause review, supplier corrective action, recurrence prevention, and internal/customer impact assessment.
- Apply practical PCB fabrication experience to identify supplier process risks, uncontrolled practices, undocumented assumptions, material or process shortcuts, and gaps between what suppliers claim they do and what is actually controlled on the shop floor.
- Train internal teams on PCB fabrication risks, defect recognition, manufacturability concerns, supplier expectations, drawing-note best practices, inspection strategy, and acceptance criteria.
- Ability to work flexible hours and/or different shifts, as required.
- Ability to work in a safe professional manner adhering to all regulatory requirements including OSHA, EPA, State, and Federal Regulations.
- As the Company's success relies on the productivity of our team and adherence to customer product schedules, an essential function of this position is the ability to arrive to work on-time and work each day as scheduled.
- Perform other duties as assigned.

Required Qualifications

- Bachelor's degree in Electrical Engineering, Manufacturing Engineering, Materials Engineering, Mechanical Engineering, Industrial Engineering, or equivalent technical experience.
- Minimum of 7 years of experience in PCB fabrication, PCB process engineering, PCB manufacturing engineering, PCB CAM/DFM, PCB supplier quality, or high-reliability electronics manufacturing.
- Hands-on experience working in or directly with PCB fabrication shops, with practical understanding of how PCB suppliers actually process work, control variation, manage materials, and handle production constraints.
- Strong understanding of rigid PCB fabrication processes, including CAM review, stack-up control, lamination, drilling, plating, imaging, etching, solder mask, surface finish, electrical test, microsection, and final inspection.
- Experience reviewing PCB fabrication drawings, fabrication notes, stack-ups, material requirements, controlled impedance requirements, and supplier technical data packages.
- Working knowledge of IPC standards and high-reliability PCB acceptance criteria.
- Experience working directly with PCB suppliers on technical questions, manufacturability concerns, quality issues, corrective actions, supplier qualification, or supplier audits.

- Ability to identify PCB fabrication risks related to materials, copper thickness, dielectric spacing, via structures, plating, laminate integrity, solderability, surface finish, cleanliness, high-voltage spacing, high-current design, and thermal performance.
- Strong communication skills and ability to work cross-functionally with Engineering, Strategic Sourcing, Supplier Quality, Manufacturing, Quality Assurance, Program Management, and external suppliers.

Preferred Qualifications

- 10+ years of relevant PCB fabrication, supplier quality, manufacturing engineering, or DFM experience.
- Experience in aerospace, defense, space, military electronics, power electronics, or other high-reliability electronics environments.
- Experience with AS9100 quality systems, AS9102-style First Article Inspection, supplier audits, and supplier corrective action.
- Experience with IPC Class 3 or mission-critical PCB requirements.
- Experience with ITAR, CUI, defense customer flowdowns, or controlled technical data environments.
- Experience with heavy copper, HDI, microvias, rigid-flex, flex circuits, high-aspect-ratio vias, via fill, or thermally demanding PCB designs.
- IPC, AS9100 auditor, Six Sigma, CQE, CQA, or related certifications are desirable.

Physical Requirements

The physical demands described here are representative of those that must to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

- While performing the duties of this job, the employee is required to remain in a stationary position consistently and move about the inside of the facility to review and monitor progress of parts through production floor.
- Operates a computer and other office productivity machinery, such as; calculator, copy machine, printers, etc.
- Frequently lifting and handling items less than 10 lbs with occasional lifting up to 40 lbs.
- Occasionally ascending or descending ladders, stairs, and the like to meetings and to access various facility locations.

Employee signature below constitutes the employees understanding of the requirements, essential functions, and duties of the position.

EMPLOYEE NAME (PRINTED): _____

EMPLOYEE SIGNATURE: _____ **DATE:** _____

Rantec is proud to be an Equal Opportunity Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, or status as a protected veteran. Rantec will consider reasonable accommodation to its policies for employees and applicants due to sincerely held religious belief.