

STRENGTHS

- **Evidence Based Analysis**
Compared CFD predictions with laboratory measurements, then used correlation findings to guide credible design decisions.
- **Cross Functional Delivery**
Worked through mechanical, product, sales, and marketing interfaces when thermal constraints affected customer applications.
- **Clear Technical Communication**
Turned model results and test evidence into concise reports and presentations that earned stakeholder confidence.
- **Practical Design Judgment**
Checked feasibility against drawings, requirements, and cooling needs before recommending product changes.
- **Persistent Issue Closure**
Kept technical findings moving through model refinement, design updates, testing, and peer review.

SKILLS

- CFD

Thermal analysis
- Heat transfer

Thermal dynamics
- Electronics cooling
- Thermal management
- Laboratory testing

Test correlation
- Design feasibility
- Technical presentations
- Customer applications
- Direct liquid cooling

EIA standards
- UL standards

Mechanical design

SUMMARY

Associate thermal engineer with four years of experience supporting power products and electronics through **thermal modeling**, CFD simulation, laboratory characterization, and mechanical design. Applies heat transfer and thermal dynamics principles with ANSYS Icepak, FloTHERM, PTC Creo, Pro/ENGINEER, and SolidWorks to assess architectures, identify constraints, and guide practical design decisions. Connects simulation predictions with laboratory evidence through instrumentation review, test planning, and correlation analysis. Partners with **mechanical engineering**, marketing, sales, product teams, leadership, and external engineering stakeholders to translate application requirements into clear analysis plans and actionable recommendations. Familiar with **advanced electronic cooling**, **direct liquid cooling** concepts, EIA standards, UL standards, technical reporting, and customer presentations. Brings a focused record of turning thermal findings into verified design updates and sound product decisions.

EXPERIENCE

Thermal Engineer, Power Electronics

Vector Power Systems  May 2024 - Present  Allentown, PA

Owns **thermal analysis** and verification for power electronics development, coordinating CFD, CAD, **laboratory testing**, design reviews, and technical communication across engineering and product stakeholders.

- Defined **ANSYS Icepak** and FloTHERM models for **power products**, creating traceable inputs for design reviews.
- Verified **CFD** assumptions against drawings, requirements, and product data before releasing thermal recommendations.
- Resolved cross functional thermal constraints with mechanical engineers while protecting system and enclosure intent.
- Compared laboratory instrumentation results with simulation predictions, identifying model changes that improved correlation quality.
- Prepared CAD inputs, calculations, technical reports, and presentations for engineering and leadership decisions.
- Closed thermal findings through design updates, model refinement, test correlation, and peer review.

Thermal Analysis Engineer, Electronics Cooling

Blue Ridge Electronics  July 2023 - April 2024  Bethlehem, PA

Supported customer electronics cooling programs through **thermal analysis**, application scoping, simulation review, **laboratory characterization**, and communication of feasible product solutions to internal teams.

- Scoped customer cooling applications with documented assumptions, requirements, and engineering inputs for review.
- Built thermal analyses from drawings and design data, then checked inputs before sharing conclusions.
- Coordinated mechanical and product stakeholders around thermal constraints affecting customer electronics cooling applications.
- Reviewed test instrumentation data and compared measured temperatures with analytical predictions during correlation studies.
- Created technical reports and presentations that connected thermal results with customer application decisions.
- Resolved open findings through documented design changes, model updates, and engineering peer review.

Mechanical Design Engineer, Power Assemblies

ForgePoint Components  June 2022 - June 2023  Reading, PA

LANGUAGES



MY CAREER



- Thermal Engineer, Power Electronics at Vector Power Systems (2.3 Years)
- Thermal Analysis Engineer, Electronics Cooling at Blue Ridge Electronics (9 Months)
- Mechanical Design Engineer, Power Assemblies at ForgePoint Components (1 Years)

- Designed electronic enclosures and power product assemblies while supporting thermal feasibility, CAD development, verification planning, and cross functional decisions for manufacturable product solutions.
- Defined enclosure and power assembly inputs, assumptions, and requirements for technical design reviews.
 - Developed thermal checks from product drawings and verified analysis inputs against released design data.
 - Adjusted mechanical interfaces after thermal reviews, preserving assembly intent and improving product feasibility.
 - Supported **laboratory testing** by reviewing instrumentation data against predicted thermal behavior and design limits.
 - Prepared **SolidWorks** and **PTC Creo** inputs, calculations, reports, and presentations for design decisions.
 - Documented design updates, analysis refinements, and peer review actions for closed technical findings.

PROJECTS

- Liquid Cooling Feasibility Study** 📅 2024
- Good thermal decisions begin with evidence. Evaluated direct liquid cooling concepts against electronics application needs, connecting feasibility questions with practical design review inputs and customer focused recommendations.
- Simulation Correlation Workflow** 📅 2023
- Reliable product development starts with trust in evidence. Structured a simulation to test correlation approach using CFD assumptions, laboratory measurements, model refinement, and clear engineering documentation.

LEADERSHIP & AWARDS

- Recognized by engineering peers for clear thermal reports connecting CFD results with laboratory evidence.
- Selected to present electronics cooling findings during cross functional product design reviews.
- Received positive stakeholder feedback for closing thermal findings through documented design updates and peer review.

EDUCATION

Bachelor's Degree in Mechanical Engineering
Lehigh University 🎓 GPA: 0 📅 2022 📍 Bethlehem, PA
Coursework: Heat Transfer, Fluid Mechanics, Thermodynamics, Mechanical Design

CERTIFICATIONS

- ANSYS Icepak Applied Electronics Cooling 📅 2023
- UL Standards Fundamentals for Product Development 📅 2024

TECHNICAL SKILLS

- **CFD Software:** ANSYS Icepak, FloTHERM, CFD simulation
- **CAD Software:** PTC Creo, Pro/ENGINEER, SolidWorks
- **Thermal Engineering:** Heat transfer, thermal dynamics, thermal analysis
- **Electronics Cooling:** Advanced electronic cooling, power electronics cooling, direct liquid cooling
- **Laboratory Testing:** Thermal characterization, instrumentation review, compliance testing
- **Simulation Correlation:** Simulation to test correlation, model validation, prediction review
- **Product Development:** Power products, system architectures, design feasibility
- **Standards:** EIA standards, UL standards, thermal compliance
- **Engineering Documentation:** Technical reports, calculations, traceable inputs
- **Technical Communication:** Design presentations, customer presentations, engineering reviews

PROFESSIONAL AFFILIATIONS

- Mechanical engineering community participant, sharing practical thermal analysis and product design knowledge.
- Thermal engineering practitioner, following electronics cooling, CFD, testing, and compliance developments.

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST