

Director of Device Design

Location: : Lehigh Valley (Bethlehem), Pennsylvania

Department: Technology Development

About iDEAL Semiconductor

At iDEAL Semiconductor, we're redefining what silicon can do.

Our proprietary SuperQ® technology is breaking long-standing performance limits of traditional power MOSFETs—enabling faster switching, higher efficiency, and more compact system designs across applications like AI infrastructure, battery management, motor drives, and fast charging.

We're a fast-moving, highly collaborative team of engineers and innovators focused on solving real-world power challenges.

Silicon. Reinvented.

The Role

We're looking for an experienced Director of Device Design with deep expertise in silicon power semiconductor device physics, architecture, and technology development. This technical leadership role will be responsible for defining and driving the development of next-generation silicon power diodes, MOSFETs, and IGBTs, pushing the boundaries of performance, efficiency, and ruggedness in power semiconductors. You will lead all aspects of device engineering, from concept definition and simulation through characterization and production release, while collaborating closely with a cross-functional product development team.

This role reports to the Chief Technology Officer

Key Responsibilities:

- Direct, mentor, and lead device design efforts for all product development activities
- Work with and provide leadership to a cross-functional team of Design, Process Integration, and Application Engineers.
- Develop and demonstrate new device concepts for power devices
- Develop optimized device designs, with considerations to performance, manufacturability, and reliability
- Design, Execution, Characterization, and Analysis of Devices through Designed Experiments
- Present results and conclusions to Internal Technical Teams (Design, Process Integration, Applications)
- Create Intellectual Property (IP) and actively participate in the IP Program

Required Qualifications:

- BS Electrical Engineering or Solid State Physics plus a minimum of 20 yrs of related experience; MS Electrical Engineering or Solid State Physics plus 16 of related experience; or PhD Electrical Engineering or Solid State Physics plus 12 yrs of related experience
- Proven history of technical accomplishment, leadership, planning & coordinating, and executing on multiple projects simultaneously.
- Proven experience leading a technical team in a product development environment.
- In-depth knowledge and experience in power semiconductor device design and process development with an emphasis on high voltage (>100V) class of Power discrete devices.
- Develop and drive next-generation technology roadmaps.

Nice to Have

- 25 years of minimum experience in power semiconductor device and process design.
- Led and managed the Device Engineering teams, providing direction, mentorship, professional development, and support.
- Multi-generational device design and process development of mid to high voltage (>100V) power MOSFET and IGBT semiconductor products.
- Proficient in charge balance/compensated type of devices.
- Proficient in TCAD simulation tools.

Why Join iDEAL

- Work on next-generation silicon technology redefining performance limits
- Direct impact on products used in high-growth markets
- Collaborative, low-ego culture with high technical depth
- Opportunity to grow with a scaling semiconductor company
- Exposure to global customers and cutting-edge applications
- Opportunity to shape the future of next-generation power electronics

Compensation & Benefits

- Competitive salary
- Equity participation
- Health, dental, and vision insurance
- 401(k), PTO

How to Apply

Submit your resume via [Careers - iDEAL Semiconductor](#)