Kunal Jha

WORK EXPERIENCE

Senior Staff Application Engineer
Infineon Technologies | Apr 2021 – Present | Los Angeles, CA

- Leading the Fit-for-Use Testing and assisting new product development for key products for their intended applications
- Creating and optimizing PCB Layouts for evaluation and demo boards for device/technology characterizations

Staff Application Engineer
Infineon Technologies | Oct 2020 – Mar 2021 | Los Angeles, CA

- Performed Competitive Benchmarking at device and system levels for key product applications
- Assisted in development of new packaging concepts to understand their impact on electrical and thermal performance

Senior Application Engineer
Infineon Technologies | Aug 2019 – Sept 2020 | Los Angeles, CA

- Conducted Trade and Performance Studies for electrical and thermal parameters of MOSFETs for different packages and technologies
- Provided Customer Support on MOSFET products

New Product Definitions Intern
Power Integrations Inc. | May 2018 – Aug 2018 | San Jose, CA

- Tested flyback converters of various power ratings used for charging applications by checking the working of new MOSFETs
- Successfully designed a high-frequency fly-back converter using Eta Designer to determine core loss of transformer for different core materials and geometries to determine their effect on system efficiency

SELECTED PROJECTS

New Product Innovation
Apr 2020 - Present | Infineon Technologies

- Tested new products in various DC-DC Converters to compare their thermal and electrical performance against existing products
- Worked with New Product Definition and Marketing teams to find areas of improvement and make the required design changes

Series-Sync Buck Converter for High-Power Solar Applications
Mar 2021 | Infineon Technologies

- Designed a series synchronous-buck converter with 12 MOSFETs to replicate Multi-Level inverter operation for reducing testing time and effort for solar applications.
- Successfully conducted thermal and waveform analysis of MOSFETs to determine if MOSFETs are fit for use in the application

Control of Induction Motor in an EV Propulsion Drive
Nov 2018 | North Carolina State University

- Developed a vehicle road model and an induction machine model for an EV in rotor flux reference frame to implement instantaneous torque control with a speed controller in indirect rotor flux orientation system
- The vehicle model successfully followed the speed command given to the controller with minimal delay in the system

CONTACT INFO

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EDUCATION

MS in Electrical Engineering
North Carolina State University, Raleigh, NC
Aug 2017 - May 2019
GPA: 3.83 / 4.0

B.Tech in Electrical and Electronics Engineering
National Institute of Technology Karnataka, India
Aug 2013 - May 2017
GPA: 8.62 / 10.0

SKILLS

Simulation

- PLECS
- SIMetrix
- Altium
- Sauna
- MATLAB Simulink
- WaveStudio
- COMSOL
- Cadence Allegro

Languages

- MATLAB
- GNU Octave
- Verilog
- C

Equipment

- 4-ch & 8-ch Oscilloscopes
- Power Supplies
- Programmable Loads
- Signal Generators
- Digital Multimeters

RELEVANT COURSES

- Power Electronics
- Advanced Power Electronics
- Power Elec. Design and Packaging
- Dynamics & Control of Elec. M/C
- Electric Motor Drives
- Semiconductor Power Devices
- Principles of Transistor Devices