

Name: Nakka Ramesh

M.Tech (Power Electronics)

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Career summary:

- 1) Having 6 months of experience as Electrical Engineer Harnik engineering services, Miyapur, Hyd. January 2019- July 2019

Professional experience:

- Power system study using Etap software
 - Cable sizing
 - Transformer sizing
 - Motor starting analysis
 - Relay coordination and ACB, MPCB, MCCB Breaker settings using Etap software
- 2) Having 2.7 years of experience as power electronics design engineer in ADVANCE SWITCHING CONVERTERS PVT LTD sister company of OHM ASCON PVT LTD,Hyderabad from November 2020 till date
- Experience in hardware design and testing of power converters.

Professional experience:

- Design engineer in power electronics.
- Involving Designed power supplies with flyback, forward, half bridge, full bridge.
- Calculation and selection of components for various topologies.
- Selection of mosfet , gate drive circuit design.
- Pulse width modulation and frequency modulation techniques.
- Voltage control mode.
- Peak current and average current control mode.
- Involving Emi filter design.
- Control loop design, frequency response analysis.
- Converter compensation and stability.
- Bode plots for transfer functions.
- Involving Magnetics design mainly high frequency transformer design.
- Input and output capacitor selection for various topologies.
- Snubber circuits.
- Design input and output of power supply Over voltage protection, Undervoltage protection and over current protection.
- Design remote control switch of power supply.
- Load sense circuit design.
- Experience in debugging of faulty power supplies.
- Experience in newly design PCBA functional testing and FAI (First Article Inspection) documentation.
- Experience in Thermal testing and Chamber programing Vibration testing EMI EMC testing as for mil std

- Modification of existing power supplies as for customer.

Tools

- LTspice, orcad Pspice, Tina, isimPE.

Equipment

- Multimeter, oscilloscope, current probe, function generator, LCR meter, Isolation meter.

Academic Profile:

- M. tech in power electronics AVN College of Engineering & Technology, Mangapally RANGAREDDY in 2018 with 81% in first class.
- B-tech in EEE Kakatiya University College of Engineering & Technology, Warangal in 2014 with 70% in first class.
- Intermediate MPC from SVS Junior College, Warangal, Board of Intermediate AP in 2010 with 94%.
- SSC from Mission High School, Warangal, Board of SSC, AP in 2008 with 86%.

Achievements:

- I secured GATE rank 5842.

Projects:

1) DC to DC module-based power supply

Module based DC to DC power supply consist of EMI filter, followed by, reverse polarity, under voltage, Over voltage, thermal protection, inhibit control switch. For isolation purpose we are using DC to DC power module. It's input range is 18V to 36V and output 3.3V/7A. We take another buck regulator to get the 1.2V/6A Input of this buck regulator taken from the output of the dc-to-dc module. In output we providing the over voltage protection.

2) Holdup power supply

This holdup power supply input range is 12V to 60V. It consists of EMI filter, followed by, reverse polarity, under voltage, over voltage, thermal protection, inhibit control switch. In this we are using buck boost controller it converts the from input range 12V to 60V to 30V/6A. Output have fully protection OVP, OCP, short. At the same we are using bi-directional buck boost controller to store the energy in bulk capacitor. At the time power interruption bulk capacitor deliver the power to load up to 150msec.

3) 80W "ACTIVE CLAMP FLYBACK" multiple (6) output isolated DC to DC converter.

This isolated DC to DC power supply input range is 18V to 36V and nominal voltage is 28V. It consists of EMI filter, followed by, reverse polarity, undervoltage, overvoltage, thermal protection, inhibit control switch. Every out voltage have OVP and OCP protection.

