



Ravi

Working as: Sr.Lead Design Engineer



Gender: Male



Location: Bengaluru (India)



Birthday: August 1989



B.Tech (Electronics & Communication)



Experience

13 Years of Experience in design and developing power electronics converters.

Achievements

Panasonic | Patented / 2020 - 2021

Semi-Smart Lighting Apparatus, Application

Number :202121015795

Prototype build and proved, Achieved an appreciation letter.

NABL LAB | Photometry / 2015 - 2016

Certified training on Photometry, Basic concepts of uncertainty in measurement. As per IS/ISO/IEC 17025:2005.

Certified as Lab technical manager

Domain

Power Electronics | Exp: 11 Years / 2011 - till date



Digital Electronics |Exp: 5 Years / 2012 - 2015



Solar and Automotive | Exp: 5 years / 2020 - 2022



Professional Skills

Power Electronics Concept developments, High level Block diagram, Simulation (MATLAB, LT Spice, Altium and Simscape Electrical, SABER, Maxwell, CST for Electromagnetics simulations.) PCB Layout, Schematic, Design calculation, EMI/EMC, Thermal Analysis, Thermal Stress on components, Power Loss calculation, Component Selection, Derating Analysis, Signal Integrity, Reliability growth test, MTBF.

> Power Domain

Good in developing AC DC, DC DC, Switching Converts, Inverters, SMPS, Analog circuits, 3 Phase Motor drivers, BLDC Converters, Multi chemistry battery charger, Charges for wireless charging -power transfer systems, High Efficient - low THD and EMI/EMC compliance power supplies, IOT and sensor operated power converts, 1W to 30kW converters, Gate Drive Designs. Developing high voltage 100V-1300V DC converts for automotive domine battery charging system.

> Solar and Battery Domain

Good In Designing and developing of MPPT Solar Charge controllers, Solar panel selection and power calculations, Battery Gauge to estimate - SOC, SOH, Time To Empty & full charge, temperature monitoring, worked on Lithium Ion, Lead Acid, LiFePO4 charge - discharge techniques, Estimating Life of battery at different DOD and temperature conditions.

> Automotive Domain

Automotive DLR LED Designs, Optical LED Lighting Drivers, LV Power converts operated via LDO and controlled by Sensors (transducer, Actuator, Inductive Sensor) , communication protocols I2C, Modbus, RS232, USB, SPI, CAN. Wireless Communications as WiFi, Bluetooth, LoRa technology. Developed Bi directional charger of L2 Type.

> Medical Domain

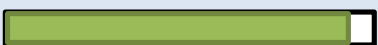
Power distribution board designed to operate the Anaesthesia Delivery System and BMS implemented to monitor the battery conditions. Used Arm Cortex MCU to

Quality Tools

POKA YOKE, KAIZEN, FAULT TREE Analysis, FISH BONE Analysis | QC|



FMEA, DRBFM | QC|R&D



Mean Time Between Failure, Reliability Engineering, Accelerated Life Testing | QC



Topologies

Buck-Boost, Flyback, Buck, Boost | Exp: 11 Years / 2011 - Till Date



Two Switch Flyback Converter, Half Bridge Converter, and Full Bridge Converter.

|Exp: 5 Years / 2016 - 2022



Non Isolated converts | Exp: 11 years / 2011 - 2022



System Tools

MS Office Tools | Exp: 11 Years / 2011 - Till Date



C++ Language | Exp: 2 Years / 2012 - 2015



Python | Exp: 2 years / 2020 - 2022



C Language | Exp: 2 Years / 2012 - 2014



GE Healthcare Pvt Ltd | Lead Design engineer / 17 Jan 2022 - Till Date

- Leading the development of 130 W of battery charger and backup systems, power AC-DC-DC converters, Logical circuits.
- Used Analog to Digital converter's (ADC and DAC),
- Developed a circuit that gives SOC, SOH, FCC, Time To Empty, Using Fuel Gauge IC and BMS for Cell balancing and safety protections.
- Performing RGT, DFT, Detail Engineering, Design Calculations documents.
- Implemented a Power Management Board (PDB) using a microcontroller.
- Performing Reliability growth testing (RGT), Lab view Verification, Power rail, MATLAB, LabVIEW, Automation Testing, Signal Integrity.

Panasonic Life Solutions India Pvt.Ltd | SR. Executive Design & Development / 23 Jul 2018 - 31 Dec 2021.

- Developing 10 KW of Lifepo4 bi-directional Battery Chargers for EV stations L2 type/VTG.
- Designed 3 Phase 30Kw Vienna PFC circuit for EV charger. Uses MCU and PFC drivers and Has CAN Protocol.
- NPD for BMS/Automobile Battery chargers/ SMPS/ Power Supplies/Lead Acid BMS
- Developing the custom specified high voltage converter used for battery charging in Automotive industry.
- Cost cutting for the existing Products
- Implementing the test procedures as per IS, IEE, CISPR, ISO, MNRE, MIL Grade etc
- Training up the team by explaining concepts in power electronics and Design Theory
- Reduction of the Market complaints (Reducing Q Loss %)
- FMEA / DRBFM /Kaizen /Poka Yoke/ Six Sigma
- Calculating the thermal stress on Components/ Life of the products/ EMI EMC tuning
- Developing custom specified, MOSFET and IGBT gate driver designs using Buck, Boost, Flyback, LLC, sepic, half bridge and Forward topologies from 1W-10kW.
- Cell balancing and Temperature measurement circuit. Design & Component selection for Charge and Discharge path circuit

CENTURY LED LTD| Senior Executive- Design / 18 Apr 2016 -05 Feb 2018.

- Making of all LED Lighting Drivers from 0.5W to 150W

Demo Kits

- BMS Fuel Gauge- with BQ studio, HV Motor drivers, 3 Phase Demo Circuits boards (Ti)
- Power Converters, Solar Controllers

IC USED

POWER Driver IC/MOSFETS |
NXP, Onsemi, Infineon, Renesas, Si Semi, Power Integration, BP Semi, Linear Technology, ST Micro, Maxic Technology, Jilin Sino, Texas Instruments (TI).

Logical IC/ Micro controllers |
Texas Instruments, Micro Chip, Infineon, Analog Devices.

Languages

English | Professional



Hindi | Professional



Telugu | Professional



- Designs as per IEEE Standards
- Documentation and process development as per ISO:90001:2015
- Working Experience with Automatic production system
- Type A and B estimation of uncertainty in measurement
- Working Experience with Panasonic SMT, Auto printing stencil and Wave Soldering Machine. (NPMW2, AP430L, SP1200LED and HF_1002-LF)
- Worked on digital circuits/ LoRa Technology / Smart streetlight Project/Internet over Things projects (IOT)/
- Power Oring Circuit designs or developing discrete converters in parallel.

SPINOFF TECHNO PARK PVT.LTD |Circuit Design Engineer / 18 Feb 2015 - 05 Feb 2016.

- Developing, Power supplies using Sensors, Solar based power inverter 1kW for household application.
- Working on double stage PF control circuits (on cheaper solution for 80W-130W)
- Working on most efficient, robust and rugged, high PF(0.98) and low THD(< 8%) long life Power Converters (18w -130W) which are specially used in Telecommunication sector.
- Making the SMPS / Solar LED drivers as per **BIS** standards.
- Complete full knowledge in the critical tests that have to be performed on led driver Working on multi tasks in R&D Section.

PROCORP ENERTECH PVT.LTD| Engineer R&D / 22 Jul 2013 - 31 Oct 2014

- Developing the long life and rugged Power supplies with low ripple voltage.
- Developing the BMS Circuits for Lithium Ion Battery and Led Acid Batteries.
- Developing DC DC Converters and AC DC converters.
- Making the solar led drivers as per MNRE STANDERDS
- Implementing the economy series of led drivers according to the market value using the Taiwan or Chinese ICs for the bulbs, tube lights and small battery operated lights. .
- Developing High power Inverter (10KW) Supplies the power to grid from battery.
- Developing (10KW) 3 phase Inverter designs for industrial applications.

Equipment's

Worked on below Equipment's

- 1) **SURGE GENERATOR - Inrush current and voltage, as per IEC 61000-4-5 /61000-4-9**
- 2) **THERMAL SHOCK TEST**
- 3) **EFT GENERATOR - As per IEC 61000-4-4**
- 4) **ESD GENERATOR - IEC 61000-4-2,MIL-STD-883E**
- 5) **IP TEST EQUIPEMENT - IP--60-65**
- 6) **GONIOPHOTOMETER (Everfine, LMT, Lisun Group)**
- 7) **EMI EMC Both Conducted Emission test.and Radiation Emission test (Rohde & Schwarz)**
- 8) **Oscilloscope (keysite, Tektronics 1Gz)**
- 9) **Frequency generator, Voltage Dip drop tester, Flicker Analyzer, Thermal Imager etc**
- 10) **Programmable -Data Logger, Electronic loads, Hi-Pot tester, Environmental test chambers, Soldering stations, precision measuring instruments/ Tools.**

HOBBIES

- Making Robotic toy's
- Love to Explore nature places all around the world.
- Badminton/ Football/ Video Games.
- Marine aquarium building.

BHAGYASHREE INDUSTRIES PVT LTD| Design and Development Engineer/ 01 Jul 2011 - 30 Apr 2013

- Executing design calculations and implementing the same as per the specs given for a product.
- Root cause analysis of field returns.
- Digital oscilloscope, Digital Power analyzer meter, Logic Analyzer.
- Conducting, documenting and communicating the tests performed on the prototype electronic circuits.
- Preparing the test reports with test specs, procedure and observations.

Educational Details

Educational Qualification	Institute	Board / University	Year of passing	% of marks
B.Tech (E.C.E)	Mother Theresa Engineering College	JNTU	2007-2012	58.8%
Inter (M.P.C)	Sri Prataparudra College (Warangal)	Board of Technical Education	2005-2007	68.8%
SSC(E/M)	Chaitanya Model High school (Warangal)	SSC	2004-2005	69.5 %

Bachelor of Engineering (Electronics and Communication Engineering)

Other Abilities

- Hard Working and Ability to work independently and as a team member in group projects.
- Credited with successfully handling client satisfaction & customer relationship.
- Responsible for increasing productivity through combined work steps, removing non-value-added tasks, adding automation and the development of effective work practices.
- Adept at lending technical support to new trainees. Possess Relationship management skills & the ability to conceive efficient solutions utilizing technology.

HR Information

Passport Status	In Active State	Valid till 08/2027
Current Work Location	Whitefield, Bengaluru	INDIA
Notice Period	Immediate Joiner	
Looking for job with	Work Visa Sponsorship	
Marital status	Yes /Married	
Expected CTC	As per Company norms	
Permanent Address	Victoria Layout, Whitefield	560066, Bengaluru, INDIA

Declaration

I hereby declare that the information furnished above is true to the best of my knowledge.

Date: 08 July 2024

Place: Bengaluru

(Raviteja)