

Analog Design Engineer Resume

★★★★★ 3.00 /5 (Submit Your Rating)

SUMMARY

- Proficient in Custom IC layout design using technology nodes: TSMC 28nm, TSMC 40nm, IBM 180nm.
- Virtuoso Layout Editor L & XL - Engineering Change Order (ECO), Generating clones, Constraints driven routing, Interactive routing, Module generator, Floor planning, Auto & Manual routing etc.
- Matching techniques, Shielding, Guard rings, DRC, LVS, ERC, Parasitic reduction and Debugging reliability issues such as HV, ESD, Latch Up, IR Drop, EM Violations etc.
- Worked in developing analog, power management, RF modules such as LDOs, Bandgap reference, Buck, Boost, Phase locked loop.
- Layout Implementation of all standard cells such as NAND, NOR, MUX, OR, AND, DFF and analog building blocks - amplifiers, comparator, oscillator, voltage and current reference circuits etc.
- All layout activities including top, cell & block level creation, edit and verification.
- Cadence design environment: Virtuoso ADE L, Spectre, Virtuoso layout editor, DRC, LVS, Layout extraction, Hierarchy editor.
- Designed, validated power controllers such as Boost, Buck, LDO's with feedback and compensation techniques.
- Behavioural modeling of PMW, DC-DC controllers, gate drivers and opamps etc.
- Device characterization testing for ADC's and Operational amplifiers (Developed ATE SW and HW).
- Expertise in design and development of mixed signal electronic circuits.
- Designed signal processing circuits for analog and digital sensor interfaces such as pressure, temperature, and hall-effect based sensors.
- Implemented quality tools like FMEA (Failure Mode Effect Analysis), DRBFM (Design Review Based on Failure Mode), and DAR (Decision Analysis).
- Hands on experience in circuit simulations (Monte-carlo and Worst-case) and circuit modeling using SABER tool.
- Strong lab and silicon validation skills. Expertise in building the required test setup, module verification, HV (High Voltage) testing and environmental testing & knowledge on EMI/EMC.

PROFESSIONAL EXPERIENCE

Confidential

Analog Design Engineer

Responsibilities:

- Worked on 28nm and 40nm RFIC circuits such as Oscillator, Ring PLLs, LC PLLs, and LDOs etc.
- Carried out module design activities such as PSS and Pnoise analysis, PVT simulations, Floor planning, Constraints driven routing, Layout, Manual routing, Extracted simulations, Top-level mixed signal verification using AMS Designer & Hierarchy editor.
- Project 2: Hardware Module development in Power Electronics Control Unit, Hybrid vehicles.
- Designed sensor interface modules and signal processing circuits etc. for the system requirements in hybrid vehicle. Activities also include Monte-Carlo, Worst-case analysis for the designed circuit.
- Developed micro-controller (MC9S12G128) hardware with I2C communication interface.
- Designed LDO regulator with higher current capability and calculated power dissipation, timing, PCB area.
- Other duties include FMEA, DRBFM, DAR, SABER simulations, bench module validation, thermal testing and report preparation.
- Critical measurements with high switching currents in simulated electric vehicle environments.
- Designed an output tank section for the required wattage of lamp.
- Design validation of sub-modules such as voltage and current sensing circuits, half bridge driver, PFC, resonance tank (LC) and filament preheating current source.
- Hard switching evaluation and thermal testing.
- Calculating the power stress on individual components of schematic.
- Calculating the loading on the sources such as SMPS Regulators and buck-converters.
- Component Engineering: Updating & replacing the non-ROHS components.
- Good presentation skills and prefer to do team work with initiative taking.
- Can provide necessary support for the project at any phase.

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