

### DIGITAL DESIGN ENGINEER

#### **Qualifications**

- · No limits in ages, gender and education levels
- Experience of Synopsys or Cadence tools for RTL designs
- Microsoft office tools (word, ppt, excel)
- · Reading and writing of engineering documents in English

#### Responsibility

- RTL design and verification for given specifications
- · Coworking with analog, application, test, safety and quality engineers
- · Strict schedule, design and evaluation managements

#### Research/development Area

- Handling the complete digital design flow (frontend and backend)
- Designing digital circuits with Verilog/System Verilog/VHDL for DSP(Digital Signal Processing), data interfaces and peripherals memory, ADC, PMIC etc.
- All steps in frontend/backend: Synthesis, P&R, Post-Timing Analysis, ATPG etc.
- Designing SCAN, BIST and test vector generation
- Experience in DFT, DFR, DFM implementations

#### **Preferred Experience and Skills**

- Filter design based on DSP
- Full-chip design verification skills and experience
- Failure analysis Functionality/performance/reliability
- Professional debugging and trouble shooting skills
- Test plan (Probe, Final, Reliability) generation
- Final test data processing and analysis
- · Quality control and management
- Functional safety related works and documentation

Location: Seoul/Daejeon (Defined by Autosilicon)



### **ANALOG DESIGN ENGINEER**

#### **Qualifications**

- No limits in ages, gender and education levels
- · Cadence tools for circuit designs
- Microsoft office tools (word, ppt, excel)
- · Reading and writing of engineering documents in English

#### Responsibility

- Analog/mixed/power circuit design and evaluation for given specifications
- · Coworking with digital, application, test, safety and quality engineers
- Strict schedule, design and evaluation management

#### Research/development Area

- High-speed data interface
- High voltage analog circuits (LED/Line/Gate/Motor drivers/Charge-pump)
- Sensor read-out IC (or analog signal processing and conditioning)
- Regulators Linear, switching, charge-pump, switched-capacitor
- ADC (Sigma-delta, SAR) and ADC supporting circuits
- High-precision, PVT-insensitive voltage/current/clock reference
- Operational amplifiers and analog filters

#### **Preferred Experience and Skills**

- Full-chip design verification skills and experience
- Verilog-A/Verilog-AMS modeling techniques
- Functional/performance/reliability failure analysis
- Professional debugging and trouble shooting skills
- Test plan (Probe, Final, Reliability) generation
- · Final test data processing and analysis
- · Quality control and management
- Functional safety related works and documentation

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### LAYOUT DESIGN ENGINEER

#### **Qualifications**

- No limits in ages, gender and education levels
- Cadence tools for layout designs
- Semiconductor fabrication process and device physics coursework
- Microsoft office tools (word, ppt, excel)
- · Reading and writing of engineering documents in English

#### Responsibility

- · Standard CMOS and High voltage full custom layout design
- · Coworking with circuit design engineers
- Strict schedule, design management

#### Research/development Area

- Full custom layout design for high precision and speed circuits
- Full custom layout design for high voltage circuits
- Full custom layout design for automotive semiconductor ICs
- ESD design for high voltage BCD technology

#### **Preferred Experience and Skills**

- Solid understanding of layout effects on circuit performance and device structure
- Analog layout technique for matching, low noise and low power consumption
- Experience in high voltage BCD technology, automotive semiconductor ICs
- High level of proficiency in custom floor-planning and hierarchical layout assembly
- Experience in SKILL and SVRF coding
- Experience in tape-out process, including working with foundry for mask making



### **TEST ENGINEER**

#### **Qualifications**

- · No limits in ages, gender and education levels
- Microsoft office tools (word, ppt, excel)
- Reading and writing of engineering documents in English

#### Responsibility

- · Develop automated characterization/test plan based on inputs from designers
- Design of probe cards, characterization PCB and load boards
- Develop programs for wafer and final test equipment (ex. Teradyne, Verigy)
- · Capture, analyze and present characterization/test data using Excel

#### **Preferred Experience and Skills**

- Working knowledge of semiconductor circuits (analog ADC/DACs, digital, signal integrity over transmission lines)
- Understanding of PCB design techniques for high speed and high-performance designs such as Analog to Digital and Digital to Analog converters
- Understanding of PCB design techniques about partitioning, traces, grounding, decoupling, filtering, shielding, and thermal management
- Familiar with use of standard lab characterization equipment
- · Wafer and Final test code development
- Experience qualifying testers and test programs for release at test houses
- Familiar with common programming languages such as MATLAB, Visual C# and Python
- Strong data analysis skills for yield reporting and improvement



### **APPLICATION ENGINEER**

#### **Qualifications**

- · No limits in ages, gender and education levels
- Over 2 years of experience
- Microsoft office tools (word, ppt, excel)
- · Reading and writing of engineering documents in English

#### Responsibility

- Product Evaluation
  - Benchmark and evaluation test
  - Evaluation kits (PCB design, firmware development, PC-based GUI development)
  - Devise innovative techniques for testing and characterizing ICs and systems
  - Working with quality engineer
- Customer Support
  - Demonstration, application guide, co-evaluation, trouble shooting
  - Writing of engineering documents application notes, evaluation reports

#### Research/development Area

- Understanding about electrical specifications and functionalities of IC products
- · Familiar with test and measurement instruments
- PCB CAD basics
- MCU, FPGA programming and data analysis/processing

#### **Preferred Experience and Skills**

- MCU, PMIC, Sensor, Motor Driver, Data Interface
- Auto CAD Design, 3D CAD Design



### **EMBEDDED S/W ENGINEER**

#### **Qualifications**

- · No limits in ages, gender and education levels
- Using good at C and C++ programming
- Using good at MCU programming, especially on STM32xxx MCU
- Basic knowledge of Analog and Digital Signal Processing
- · Reading and writing of engineering documents in English

#### Responsibility

- Develop firmware code including algorithm and device driver
- Investigate and implement various algorithm in C
- Test and analyze implemented algorithm
- Co-research with circuit designers

#### **Preferred Experience and Skills**

- Experience with various kinds of MCU
- · Experience with various kinds of peripherals and device driver
- Familiar with embedded software programming development tools and environment
- Understand and implement algorithm in C code
- · Familiar with debugging and analyzing C code on MCU
- Familiar with handling test equipment such as oscilloscope, DMM and logic analyzer
- Understand and implement hardware schematic

Location: Seoul/Daejeon (Defined by Autosilicon)



### S/W ENGINEER

#### Qualifications

- · No limits in ages, gender and education levels
- Using good at Python, java, etc. like development tools
- Reading and writing of engineering documents in English

#### Responsibility

- Develop a module for test tool based on the Linux
- Develop batch job controllers through the deep learning
- · Develop a web service for the test and analysis with the Python
- Co-research with circuit designers

#### **Preferred Experience and Skills**

- Deep understanding or experience in the field of the deep learning and the deep learning framework
- Knowledge or experience of the EDA tools especially Cadence
- Processing or analysis of the pattern from tons of raw files
- · Distribute processing for the big data
- Familiar with the Linux environment(centos), especially shell script
- Familiar with the web service development using the java script



### **QUALITY ENGINEER**

#### Qualifications

- High learning ability (No limits in ages, gender and education levels)
- Over 2 years of experience in quality control of semiconductor products
- Well understating about electric/electronic specifications of ICs or circuits
- Microsoft office tools (word, ppt, excel)
- · Reading and writing of engineering documents in English

#### Responsibility

- · Product quality control and management
- Internal product audit and assessment ISO 9001/ISO 26262
- · Engineering documentation and co-work with development teams
- Communication with quality team of customers and external auditors

#### **Experienced Area**

- Production quality control or reliability test of semiconductor(electronic) devices
- Failure analysis and report documentation of electronic devices
- Knowledge about analysis equipment for failure analysis
- · Knowledge about statistical data processing

#### **Preferred Experience and Skills**

- Understanding of JEDEC standards for semiconductor devices (ICs)
- Familiar with ISO 9001, ISO 26262 (or IEC 61508 or similar standards)
- Experience with safety architecture and analysis (FMEA and FMEDA)



### **FUNCTIONAL SAFETY ENGINEER**

#### **Qualifications**

- Bachelor's or Master's degree in electrical engineering or comparable.
- Fluent communication in English or Chinese (verbal & written) plus German skills
- Experience in semiconductor product development, understanding in automotive industry incl. ISO 26262, IEC 61508 (desirable)
- Friendly communication skills and tender personnel characters

#### Responsibility

- Deployment of functional safety for technical and business engagement with internal engineering teams, customers and ecosystem partners
- · Analysis and development of functional safety features in semiconductor products
- Approach and review of the safety concept or hardware architecture in accordance with safety requirements including customer requirements
- · Technical review and confirmation of safety mechanisms against random hardware faults
- Safety analysis (qualitative and quantitative) FMEA, FMEDA, FTA, DFA
- Configuration and documentation management for all functional safety products
- Coordination and support of confirmation and verification review with internal teams or departments
- Engagement and coordination for product certificate from top-tier global certificate body satisfying requirements of "independence level 3" as defined in ISO 26262 up to ASIL-D.
- Improvement of the proprietary functional safety management(FSM) processes against systematic faults
- Acquisition of personnel certificate of functional safety engineer from top-tier global certificate body for functional safety competency

#### **Preferred Experience and Skills**

- Familiar with ISO 26262 (or comparable standards) including safety analysis
- Experience of development and success of production in semiconductor chipsets
- Proficient skills of ALM(application lifecycle management) tools to implement and improve development process
- Personnel global certificate for functional safety engineer