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CYIENT

Automotive Circuit Design Engineer (Power Electronics)

Job Information

Hiring Company
Cyient K.K.

Job ID
1490433

Industry
Automobile and Parts

Job Type
Permanent Full-time

Location
Kanagawa Prefecture

Salary
Negotiable, based on experience

Refreshed
April 15th, 2025 11:00

General Requirements

Minimum Experience Level
Over 6 years

Career Level
Mid Career

Minimum English Level
Business Level

Minimum Japanese Level
Business Level

N2 and above

Minimum Education Level
Bachelor's Degree

Visa Status
Permission to work in Japan required

Job Description

Position: Automotive Circuit Design Engineer (Power Electronics)
Location: Yokohama
Language: N2 and above

Job Description:

Responsibilities:
- Design and develop automotive electronic circuits for applications including:
- Inverters for motor control
- DCDC converters
- Battery control systems (fast charging)
- DC/DC power supplies (flyback)
- Resolver circuits
- Motor control microcomputer circuits
- Utilize circuit simulation tools (LTspice, PSpice, Scideam) to validate and optimize designs.

- Analyze component data sheets to select appropriate components and configure circuits effectively.
- Conduct hardware testing and verification using oscilloscopes and Hardware-in-the-Loop Simulation (HILS).
- Document circuit design content, validate design performance, and prepare technical reports.
- Collaborate with other engineers and technical teams to ensure project success.
- Stay up-to-date with the latest advancements in automotive electronics and power management technologies.

Required Skills

Qualifications:

- Bachelor's degree in Electrical Engineering or a related field.
- Minimum of 5 years of experience in Analog circuit design experience.
- Proven experience in power electronics design, particularly with high voltage and high current applications.
- Expertise in analog circuit design and power electronics circuits (inverters, DCDC converters, flyback converters).
- Experience with motor control microcomputer circuit development and resolver circuits is a strong plus.
- Proficiency in circuit simulation software like LTspice
- Experience in circuit diagram creation tools (OrCAD, etc.) and circuit simulation software (PSpice, Scideam) is plus
- Experience in Automotive ECU design and development is additional plus
- Hands-on experience with hardware testing equipment (oscilloscopes) and HILS testing.
- Strong understanding of functional safety concepts and automotive safety standards (ISO 26262 preferred).
- Excellent analytical and problem-solving skills.
- Ability to work independently and as part of a team.
- Strong communication and interpersonal skills.
- Ability to prioritize tasks and meet deadlines.

Company Description