

## Decoding HSD Connector Series: Technical Specifications and Regional Variations

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Understanding HSD307/HSD409 Series Architecture

These hybrid connectors combine high-speed data transmission with power delivery capabilities. The numerical codes reveal critical design parameters:

HSD307-05C16-US: 3.0mm contact pitch with 7A current capacity HSD409-05C12-EUR: 4.0mm pitch supporting 9A continuous load

Regional Compliance Markers
Suffix codes indicate specialized adaptations:

US: FCC Part 15 Subpart B compliant

EUR: ECE R10 electromagnetic compatibility JP: JASO D617-2008 automotive standard

**Automotive Ethernet Implementation** 

Recent ADAS developments demand 100BASE-T1 compatibility. The C08/C11 variants demonstrate:

15.5mO contact resistance at 85?CIP6K9K waterproofing in JP models3dB insertion loss reduction through elliptical contact geometry

Case Study: Battery Management Integration Gotion's modular packs using HSD307-05C08-US achieve:

28% weight reduction vs traditional harnesses 500V/m EMI immunity in 1GHz-6GHz range

Material Science Breakthroughs
Phosphor bronze alloys with 0.3mm Au/Ni plating enable:

150% improvement in mating cycles (15,000+ cycles) Contact resistance stability within ?2% from -40?C to 125?C



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Thermal Management Strategies The C16 variants incorporate:

AlSiC composite heat spreaders 0.8W/m?K thermal interface materials Junction-to-ambient thermal resistance

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