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SciSense

The technical content of this document under ams / Applied Sensors / acam-messelectronic / Cambridge CMOS Sensors is still valid.

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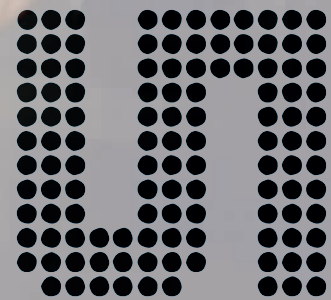
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ICs for Capacitive Sensing Applications



ICs for Capacitive Sensing

- Touchless, wear-free, established technology
- EMC: innovative technology based on EMC-robust impedance measurement
- Functional Safety: development flow according ISO26262
- Quality: long term delivery and quality due to ams' own production and test facility in central Europe

We provide innovative analog solutions to the most challenging applications in sensor and sensor interfaces, power management, and wireless.

General Description

ams has long time experience in capacitive sensing applications. ams' ICs perform high-precision measurements supported by a multitude of diagnosis features (functional safety!). The capacitive ICs are specially designed to work under high electro-

magnetic disturbances (EMC) such as the operation of mobile phones in the car. ams has long-term experience in safety. EMC-robust designs allow our customers to create demanding safety-critical applications.

Applications

- ams is using the experience in capacitive sensing for
- Autonomous driving applications like hands on/off detection
- Detection of human presence interior and exterior of vehicles
- Safety applications like child seat detection

Features

- Non-mechanical detection
- High EMC robustness
- Capacitive accuracy < 10fF
- Best-in-class resolution over wide frequency range and in high frequency domain
- Ultra low power consumption < 200 μ A
- Wide capacitive dynamic range up to 16 bit

Application Diagram for Capacitive Sensing

