

Features

- Outstanding performance
 - Advanced analog & digital signal processing
 - Ultrasound signal coding
 - Automatic thresholds
 - Near-field data collection
- High robustness and good diagnostics
 - Ringing time and ringing frequency measurement
 - Self-test capabilities
 - Fast time constant algorithm
 - Integrated temperature sensor
- Flexible high-speed DSI3 communication interface
- Embedded 32 bit micro controller (Arm® Cortex®-M0)
 - 32 kByte OTP (31 kByte for customer)
 - 256 Byte EEPROM (208 Byte for customer)
 - 4 kByte SRAM
- Supports center tapped transformers
- Widely configurable signal conditioning
- Developed acc. to ISO-26262:2011 with safety requirements rated up to ASIL B
- QFN20L5 package, optional with special lead plating

Applications

- Ultrasonic park assist systems (USPA, PAS, ...)
- Advanced driver assistance systems (ADAS)
- Distance and level metering

General Description

This device provides outstanding performance in ultrasonic applications. The embedded programmable micro controller offers maximum flexibility to adapt to various applications.

The advanced and very reliable echo detection in combination with comprehensive digital signal processing (advanced filters, automatic thresholds, echo peak detection, sensitivity time control, ...) optimizes short and long range detection performance. The new ultrasound signal coding realizes high robustness against noise, environmental conditions and other ultrasound sources.

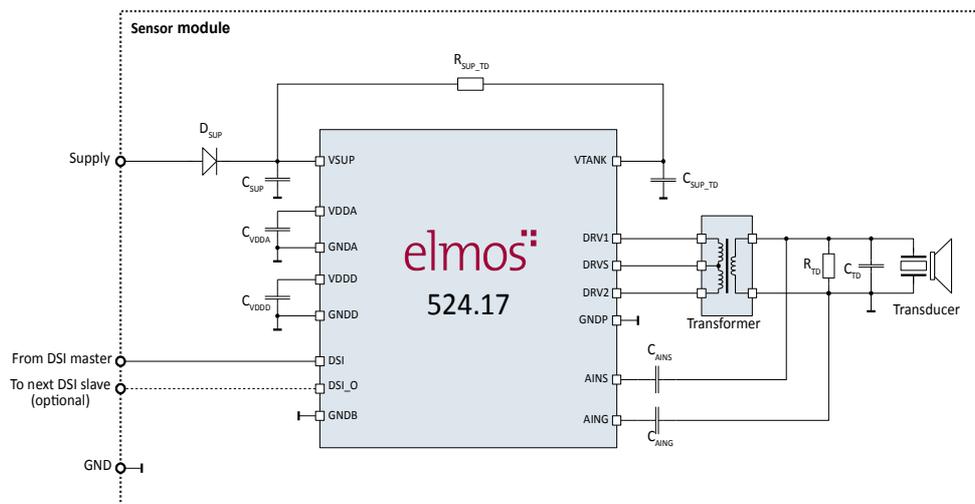
DSI3 communication with up to 444 kbit/s per sensor enables a high payload data transfer to reduce system reaction times. Both point-to-point topology and bus mode are supported.

The powerful 32-bit Arm® Cortex®-M0 offers many features for special analysis, evaluation and debugging purposes (e.g. envelope and raw data output).

Ordering Information

Product ID	Order Code	Package
E524.17	E52417A62C	QFN20L5 w/o SLP
E524.17	E52417A62CXX2	QFN20L5 with SLP

Typical Operating Circuit



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