

Features

- ▶ Driver for Ultrasonic transducer using centre tapped transformer
- ▶ Supports
 - Park Assist
 - Side Park Assist
- ▶ Build in diagnostic functions, eg.
 - Short or open transducer output
- ▶ Two Measurement Modes
 - Direct
 - Indirect for triangulation
- ▶ Temperature sensor
- ▶ Storage of adjustment values in EEPROM
- ▶ Digital filtering and signal processing
- ▶ Low noise down to $0.5\mu V_{RMS}$ referred to input
- ▶ Internal oscillator
- ▶ LIN 2.1 interface with SNPD (Slave Node Position Detection)

Applications

- ▶ Ultrasonic Sensor Systems with 30 to 80 kHz
- ▶ Park Assist System
- ▶ Side Park Assist System

General Description

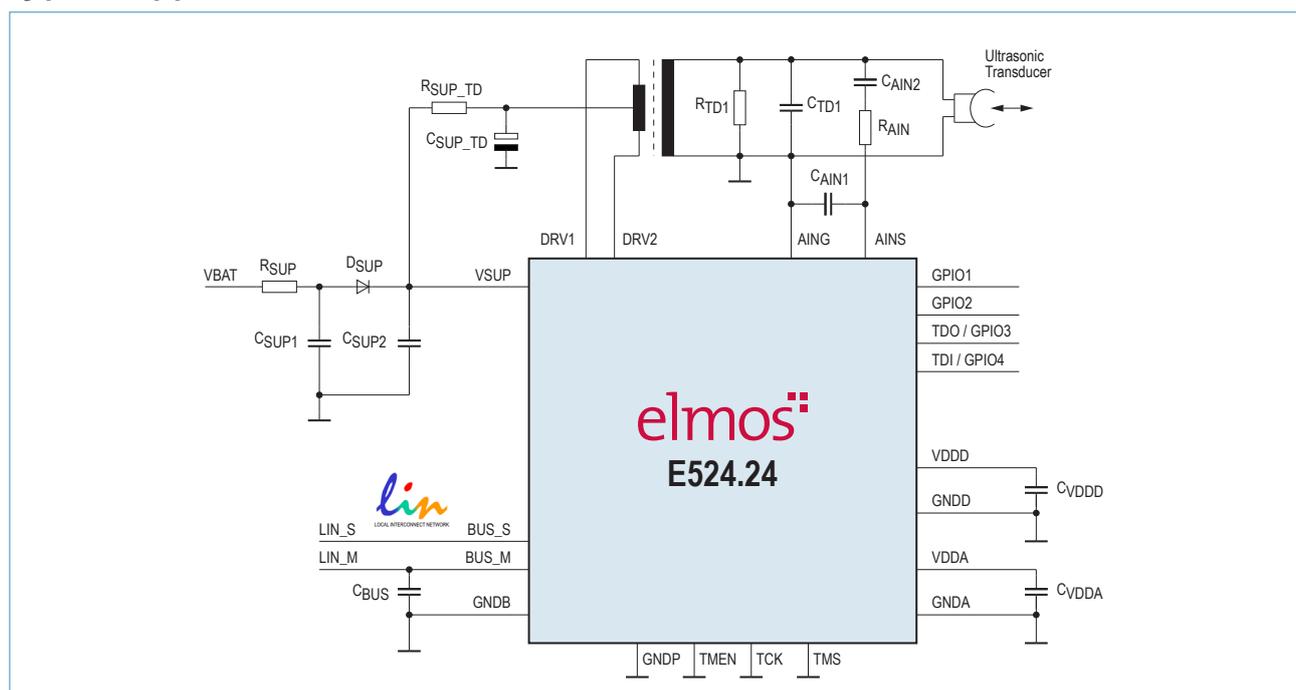
The IC drives an ultrasonic transducer via a centre tapped transformer with a programmable frequency. After amplification and A/D-conversion the signal is digitally filtered to achieve a perfect tracking to the sending frequency without external components and trimming. The adjusted values of oscillator/sending frequency, transmitted power receiver sensitivity can be adjusted and stored in an internal EEPROM. The circuit communicates with a central control device via a single-wire bus which is physically LIN 2.1 compatible. For ease of use a LIN-driver and standard application functions like threshold generation and timer capture are available.

Several diagnostic functions are implemented. A short or open at the transducer output can be detected as well as thermal shut down or under voltage.

Ordering Information

Product ID	Temp Range	Package
E524.24	-40°C to +105°C	QFN20L5

Typical Application Circuit



This document contains information on a new product. Elmos Semiconductor AG reserves the right to change specifications and information herein without notice.

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