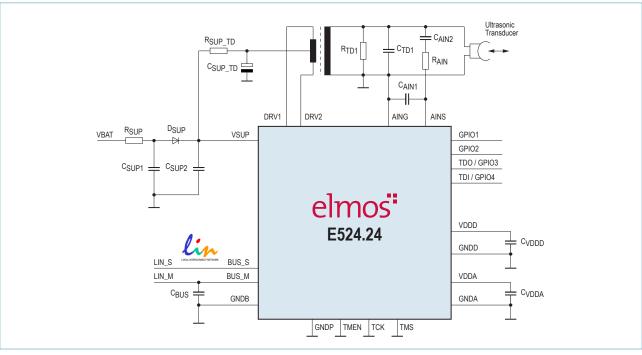## Features

► 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 (**S**lave **N**ode **P**osition **D**etection)

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

Elmos Support 07/2013

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