elmos

RoHS compliant

Features

- ▶ Drives one bipolar stepper motor
- ▶ Sensorless stall detection
- ▶ Programmable chopper current up to 2*190mA
- ▶ Micro-stepping capability
- ▶ Supply voltage 7V to 18V (reduced 6V to 25V,42V)
- ▶ Sleep mode current typically 30µA
- ▶ 8 bit micro-controller with 256 Byte RAM
- ▶ 8 KByte FLASH memory (FLASH version)
- ▶ 8 KByte ROM (ROM version)
- ▶ 64 Byte customer EEPROM
- ▶ Potentiometer input and digital I/O interface DI1,2;DO
- ▶ LIN2.x transceiver compatible to LIN2.2A, LIN2.1, LIN2.0, LIN1.3 and SAE-J2602-2
- ▶ LIN auto-addressing
- ▶ Junction temperature range -40°C to +150°C

Applications

- ▶ Universal bipolar stepper motor actuators
- ▶ HVAC flap actuator
- ▶ Small grill shutter
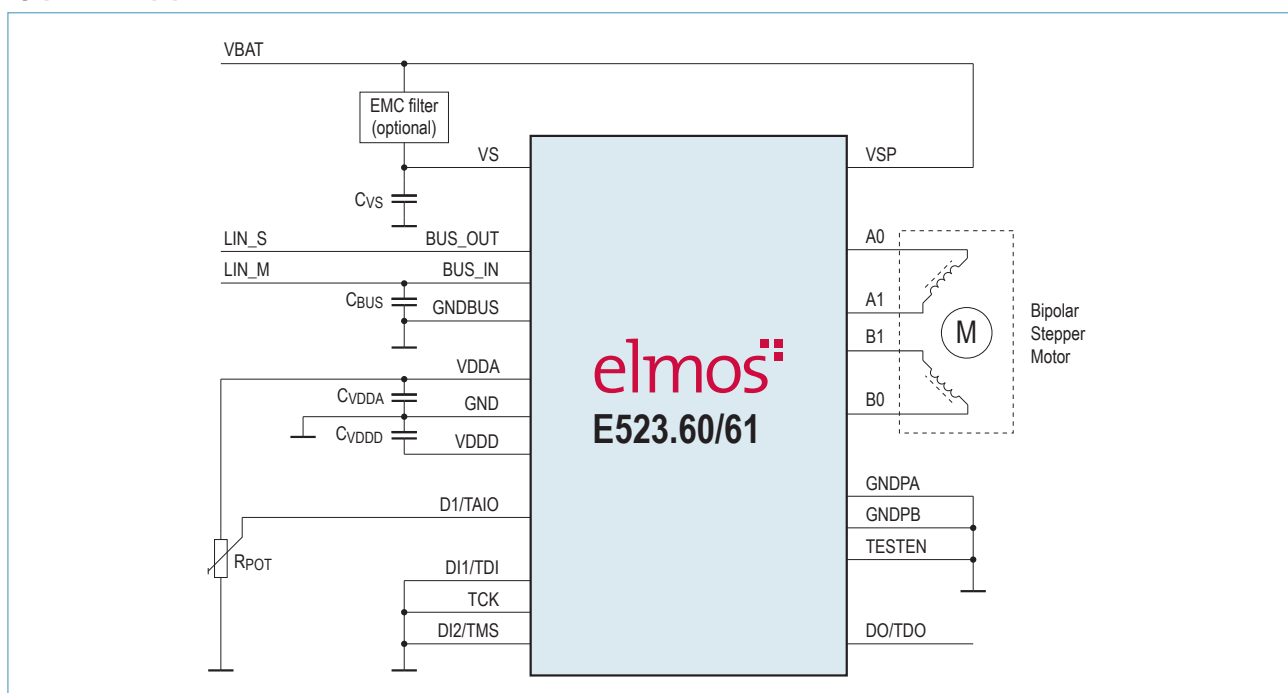- ▶ Water valve actuator
- ▶ Multi purpose LIN slave

General Description

This bipolar stepper-motor actuator provides a sensorless end position detection which also is able to detect a blocked motor due to mechanical problems. This function, called "stall detection" is performing within a wide range of motors, supply voltages and ambient temperatures. The stepper motor coil currents can be controlled by the integrated micro-controller and a current chopper principle. For precise absolute positioning it is possible to supply and read out a potentiometer. The state of the art LIN 2.2Rev.A / LIN2.1 transceiver with auto-baud functionality is downwards compatible to LIN1.3. For fast customer's end-of-line FLASH firmware programming, the FLASH-version is prepared with a JTAG interface. Alternatively a partial or complete FLASH update can be done via high-speed-LIN communication.

Ordering Information

Product ID	Features	Package
E523.60	8k FLASH	QFN32L6
E523.61	8k ROM	QFN20L5

Typical Application Circuit

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