

8-Channel Squib Driver with Current Counter

E981.21

Production Data - Dec 11, 2015



Features

- Input operation range 8V to 35V
- Three squib current modes (LCM, HCM1 and HCM2) selectable via SPI commands
- Simultaneously firing of 8 loops possible
- Short circuit detection and monitoring during deployment
- Squib channel diagnostics, monitoring and current counter
- Autarky voltage and squib supply voltage diagnostics
- Separate low side and high side driver control
- Serial interface (SPI synchronous communication) to μC (3.3V and 5V tolerant inputs)
- Minimum external components necessary

Applications

- Squib driver in a Restraint Diagnostic and control Module (RDM)

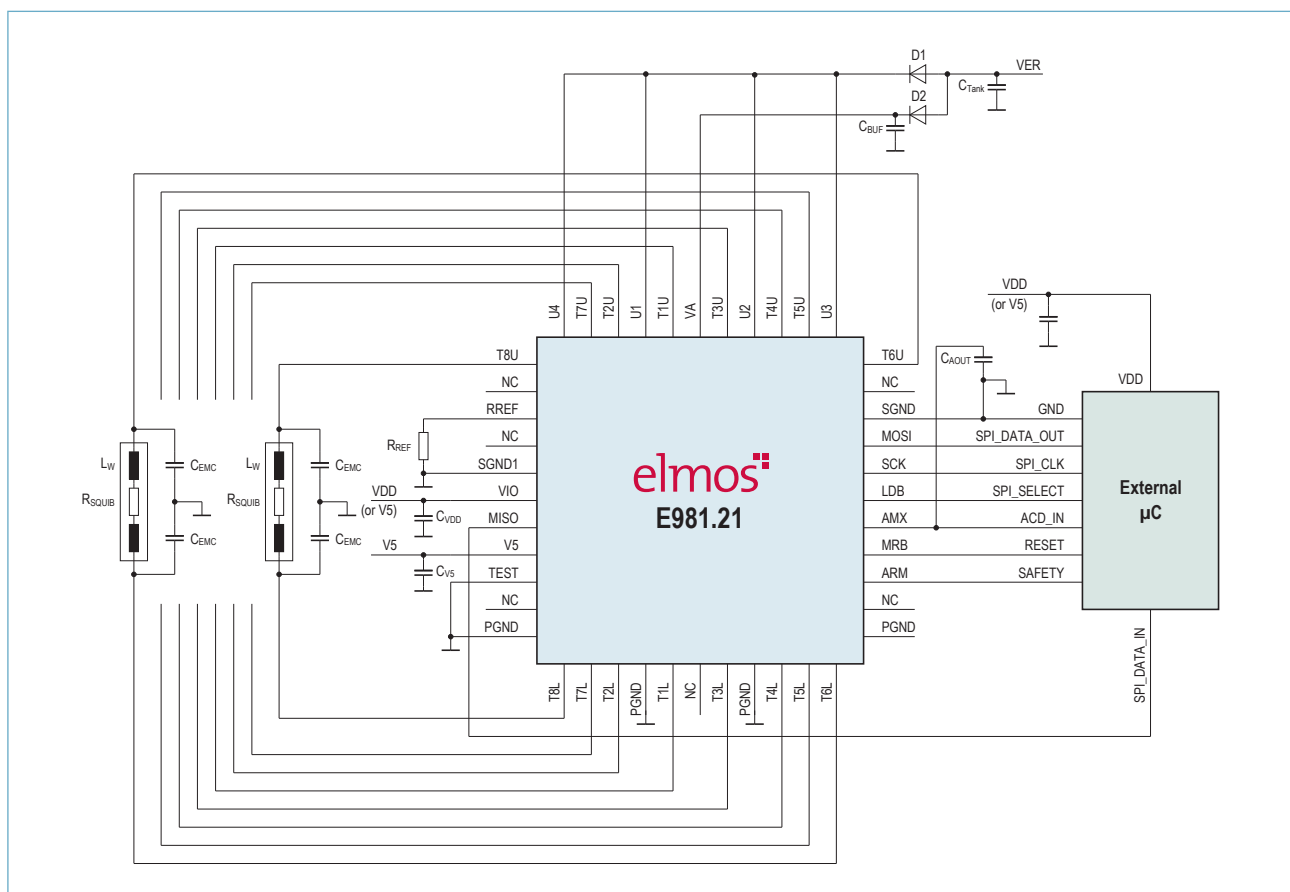
General Description

The Eight Channel Squib Driver ASSP E981.21 is designed specifically for automotive airbag applications. The IC provides individual control and diagnostics for 8 floating squibs. It has two sources of control, an arming sensor signal and a μC signal via the SPI bus. An active signal at the arming sensor input will activate all selected drivers, which have been enabled by the μC . During firing the squibs, the input voltage of the high side switch is limited to 25V for LCM and HCM2 Mode and to 35V in HCM1 Mode by the system. In order to limit the power dissipation of the driver stages, internal firing limitation counters (FTL) are implemented for each high side driver. Additionally an over voltage detection for all 8 LSD (V_{TxL}) output voltages is provided to avoid a damage of the drivers in case of a short to battery during firing and during driver test in application.

Ordering Information

Ordering-No.:	Temp _{Amb} Range	Package
E98121A39B	-40°C to +95°C	QFN44L7

Typical Application Circuit



Elmos Semiconductor AG reserves the right to change the detail specifications as may be required to permit improvements in the design of its products.

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