

► Non volatile contact monitor

FEATURES

- ▶ Supply voltage range VS 6.9V to 19V
- ▶ On chip voltage clamping
- ▶ Under voltage reset
- ▶ Charge pump to generate programming voltage
- ▶ Redundant non - volatile memory
- ▶ Periodical check of data consistency
- ▶ Automatic data correction in case of inconsistency
- ▶ Two I/Os to detect switch activation and drive LEDs
- ▶ -40°C to +85°C operating temperature
- ▶ SO8n package

APPLICATION

- ▶ Status IC for switches

DESCRIPTION

The IC is designed for use in electric power window systems to store and display the status of a childproof lock function of the rear windows. The actual status is stored in three bits of the EEPROM whenever switch activity is detected. The redundant information is checked periodically by a two out of three selection and in case of one bit distinguishes from the others, the dominant information is stored in all three EEPROM cells again.

To make sure that programming the memory is successful under all supply voltage conditions, the energy is taken from an external capacitor once the programming cycle has started. The capacitor is charged by an internal voltage regulator. Switch detection and the start of the programming cycle are disabled by an undervoltage detection, while a programming cycle once started will always be completed.

Two I/O Pins are used for detecting switch activation as well as driving the LEDs to display the status. An open drain low-side driver output "KISI" is active when the rear window operation is released.

Detection of a short to ground, an open load or an overload condition on KISI will be indicated by flashing the red LED with 2Hz.

BLOCK DIAGRAM

