

WST6050AN-L**Smart High-Side Power Switch Single Channel, 35mΩ, DFN9×6-14L , AEC-Q100 qualified****Application**

- ◆ Suitable for resistive, inductive and capacitive loads
- ◆ Replaces electromechanical relays, fuses and discrete circuits
- ◆ Most suitable for loads with high inrush current, such as lamps
- ◆ Suitable for 12V and 24V trucks + trailer and transportation systems

Basic Features

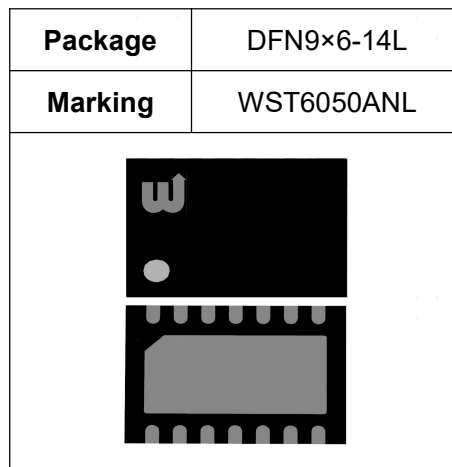
- ◆ PRO-SIL™ ISO 26262-ready for supporting the integrator in evaluation of hardware element according to ISO 26262:2018 Clause 8-13
- ◆ Single channel device
- ◆ Very low stand-by current
- ◆ 3.3 V and 5 V compatible logic inputs
- ◆ Optimized electromagnetic compatibility
- ◆ Very low electromagnetic susceptibility
- ◆ Adjustable current limitation

Diagnostic Functions

- ◆ Proportional load current sense
- ◆ High current sense precision for wide range currents
- ◆ Off-state open load detection
- ◆ OUT short to VS detection
- ◆ Overload and short to ground latch-off
- ◆ Thermal shutdown latch-off
- ◆ Very low current sense leakage

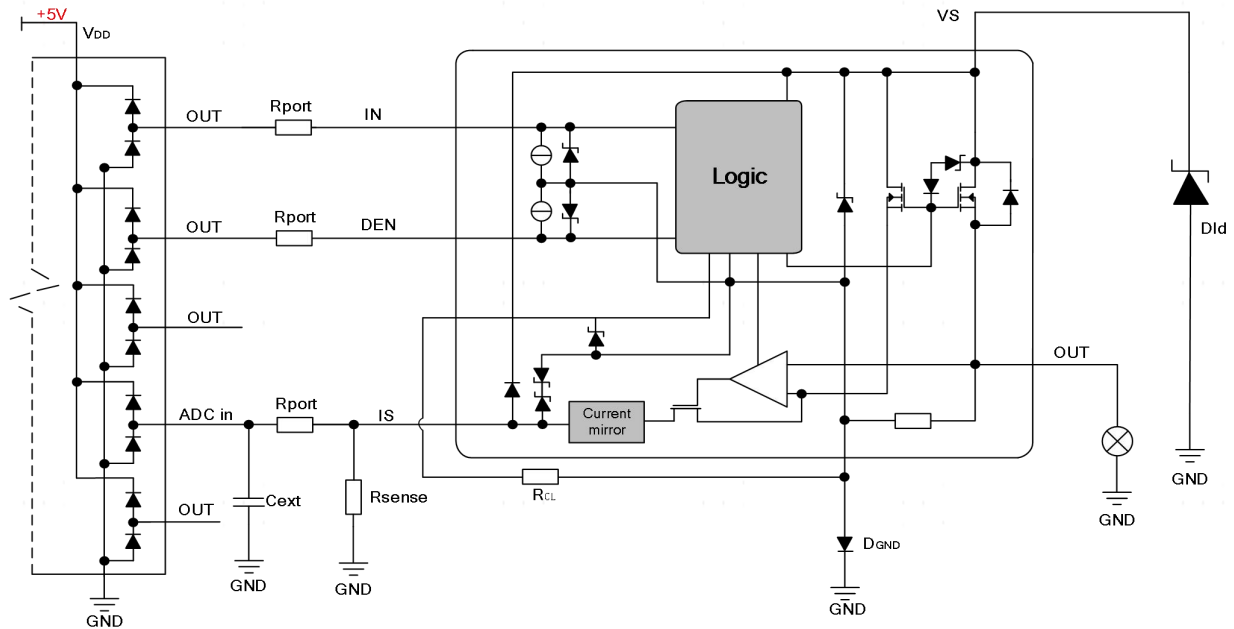
Protection Functions

- ◆ Undervoltage shutdown
- ◆ Overvoltage clamp
- ◆ Load current limitation
- ◆ Self limiting of fast thermal transients
- ◆ Protection against loss of ground and loss of VS
- ◆ Thermal shutdown

**Product Summary**

Parameter	Symbol	Value
Max. transient supply voltage	V_S	60V
Operating voltage range	V_{NOM}	8-36V
On-state resistance ($T_J = 25^\circ\text{C}$)	R_{ON}	35mΩ
Nominal load current ($T_J = 25^\circ\text{C}$)	$I_{L(NOM)}$	7A
Typical current sense ratio ($I_{OUT}=2A$)	K	1820
Current limitation	I_{LIMH}	Adjustable
Supply current in sleep	I_{SLEEP}	3uA

Typical Application Circuit



Note1: For D_{GND} , the diode with lower V_F is advisable.