

#### WST6050AN-L

## Smart High-Side Power Switch Single Channel, $35m\Omega$ , 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**

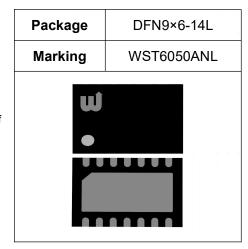
- Proportional load current sense
- High current sense precision for wide range currents
- ◆ Off-state open load detection
- OUT short to VS detection
- Overload and short to ground latch-off
- ◆ Thermal shutdown latch-off
- Very low current sense leakage

#### **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	Vs	60V
Operating voltage range	V <sub>NOM</sub>	8-36V
On-state resistance (T <sub>j</sub> = 25°C)	R <sub>ON</sub>	35mΩ
Nominal load current (T <sub>j</sub> = 25°C)	I <sub>L(NOM)</sub>	7A
Typical current sense ratio (I <sub>OUT</sub> =2A)	К	1820
Current limitation	I <sub>LIMH</sub>	Adjustable
Supply current in sleep	ISLEEP	3uA







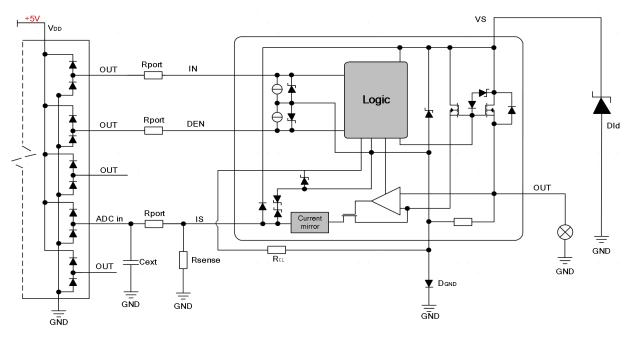




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# **Typical Application Circuit**



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

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