

## WSTD6050AN

Smart High-Side Power Switch Dual Channel, 38mΩ, 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 12 V and 24 V trucks + trailer and transportation systems

### Basic Features

- ◆ Dual channel device
- ◆ Very low stand-by current
- ◆ 3.3 V and 5 V compatible logic inputs
- ◆ Optimized electromagnetic compatibility
- ◆ Very low electromagnetic susceptibility

### Diagnostic Functions

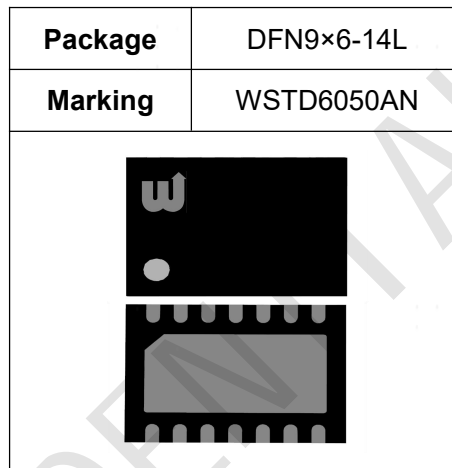
- ◆ Proportional load current sense
- ◆ High current sense precision for wide range currents
- ◆ Off-state open load detection
- ◆ OUT short to VS detection
- ◆ Overload and short to ground latch-off
- ◆ Thermal shutdown latch-off
- ◆ Very low current sense leakage

### 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
- ◆ Electrostatic discharge protection

### Product Summary

Parameter	Symbol	Value
Max. transient supply voltage	V <sub>S</sub>	60V
Operating voltage range	V <sub>NOM</sub>	8-36V
On-state resistance (per channel, T <sub>J</sub> = 25°C)	R <sub>ON</sub>	38mΩ
Nominal load current (one channel active, T <sub>J</sub> = 25°C)	I <sub>L(NOM)1</sub>	7A
Nominal load current (All channels active, T <sub>J</sub> = 25°C)	I <sub>L(NOM)2</sub>	5A
Typical current sense ratio (I <sub>OUT</sub> =2A)	K	1640
Current limitation	I <sub>LIMH</sub>	16A
Supply current in sleep	I <sub>SLEEP</sub>	3uA



RoHS

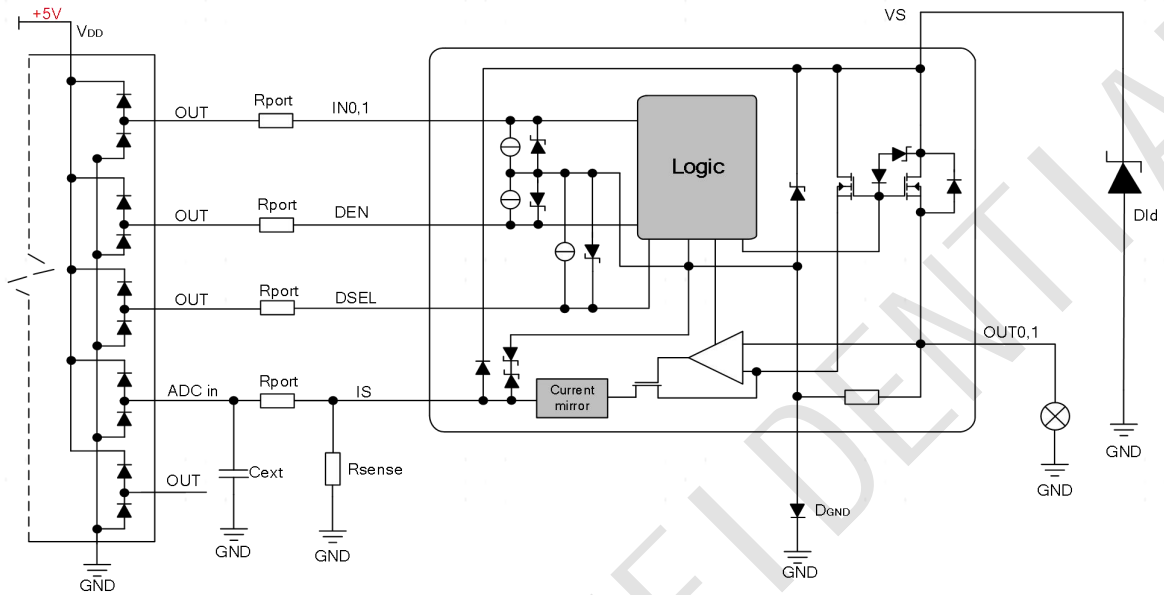


ISO 26262 ready



Halogen-free

### Typical Application Circuit



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