

## WST5020AN-L

Smart High-Side Power Switch Single Channel, 20m $\Omega$ , DFN9 $\times$ 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

- ◆ 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

<b>Package</b>	DFN9 $\times$ 6-14L
<b>Marking</b>	WST5020ANL

### 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



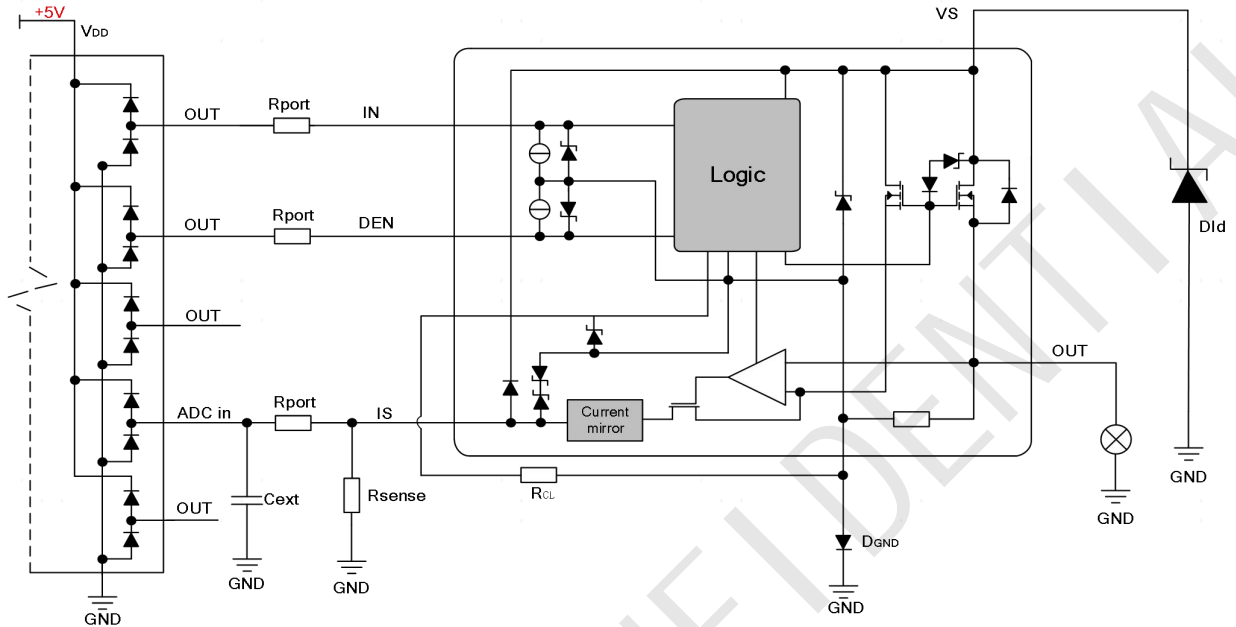
### Protection Functions

- ◆ 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( $T_j \geq 25^\circ\text{C}$ )	$V_S$	70V
Operating voltage range	$V_{\text{NOM}}$	5-58V
On-state resistance ( $T_j = 25^\circ\text{C}$ )	$R_{\text{ON}}$	20m $\Omega$
Nominal load current ( $T_j = 25^\circ\text{C}$ )	$I_{\text{L(NOM)}}$	9A
Typical current sense ratio ( $I_{\text{OUT}}=4\text{A}$ )	K	3200
Current limitation	$I_{\text{LIMH}}$	Adjustable
Supply current in sleep	$I_{\text{SLEEP}}$	5 $\mu\text{A}$

### Typical Application Circuit



Note1: For D<sub>GND</sub>, the diode with lower V<sub>F</sub> is advisable.