

WSTD6080AN-F

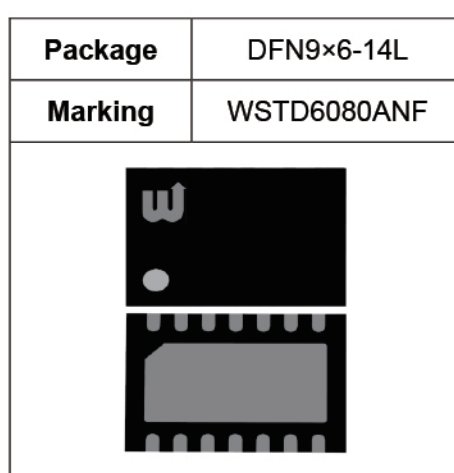
Smart High-Side Power Switch Dual Channel, 70mΩ, DFN9×6-14L , AEC-Q100 qualified

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
- ◆ Can be used for PWM frequencies up to 2 kHz



Product Summary

Parameter	Symbol	Value
Max. transient supply voltage	V_S	60V
Operating voltage range	V_{NOM}	8-36V
On-state resistance (per channel, $T_J = 25^\circ\text{C}$)	R_{ON}	70mΩ
Nominal load current (one channel active, $T_J = 25^\circ\text{C}$)	$I_{L(NOM)1}$	5A
Nominal load current (All channels active, $T_J = 25^\circ\text{C}$)	$I_{L(NOM)2}$	3.5A
Typical current sense ratio ($I_{OUT}=2A$)	K	925
Current limitation	I_{LIMH}	10A
Supply current in sleep	I_{SLEEP}	3uA

Diagnostic Functions

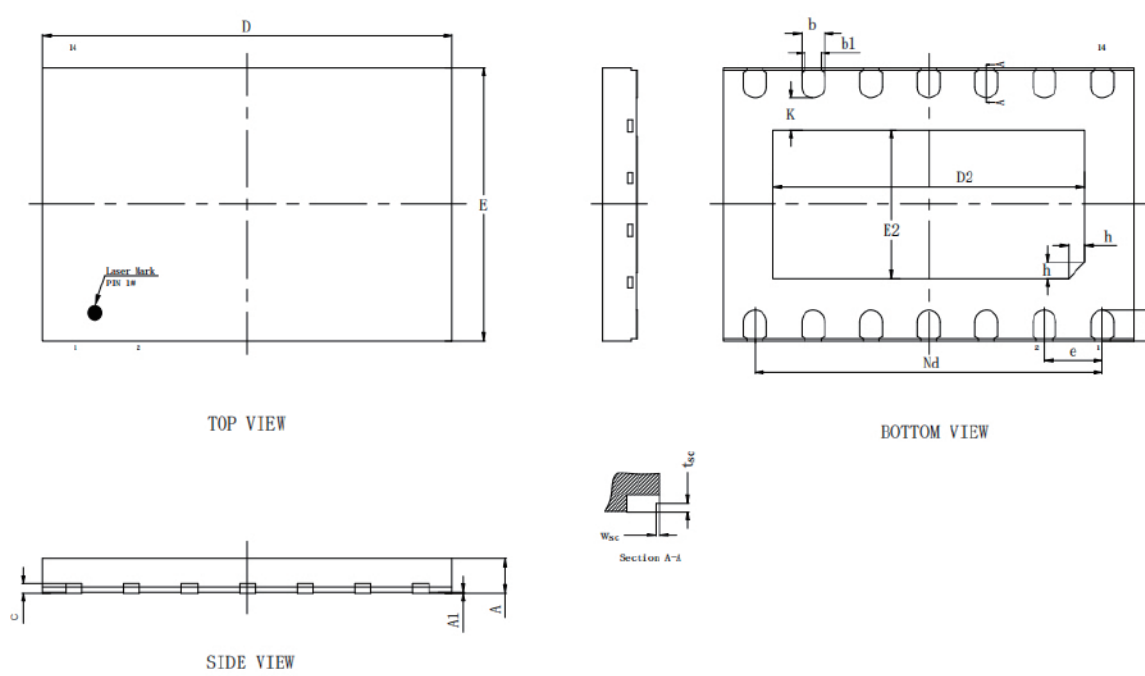
- ◆ Proportional load current sense
- ◆ High current sense precision for wide range currents
- ◆ Off-state open load detection
- ◆ OUT short to VS detection
- ◆ Overload and short to ground latch-off
- ◆ Thermal shutdown latch-off
- ◆ Very low current sense leakage

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

Package Outline

DFN9×6-14L



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.70	0.75	0.80
A1	0	0.02	0.05
b	0.45	0.50	0.55
b1	0.35REF		
c	0.203REF		
D	8.90	9.00	9.10
D2	6.75	6.85	6.95
e	1.27BSC		
Nd	7.62BSC		
E	5.90	6.00	6.10
E2	3.16	3.26	3.36
L	0.62	0.67	0.72
h	0.30	0.35	0.40
K	0.70REF		
W_{SC}	0.01	-	0.09
t_{sc}	0.08	-	0.18