

WSD7020AF

Smart High-Side Power Switch Dual Channel, 23m Ω , DFN5 \times 6-14L , AEC-Q100 qualified

Application

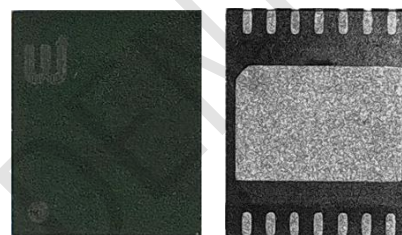
- ◆ Suitable for resistive, inductive and capacitive loads
- ◆ Specially intended for automotive signal lamps
- ◆ Replaces electromechanical relays, fuses and discrete circuits

Basic Features

- ◆ Single channel device
- ◆ Standby current <2.0 μ A
- ◆ 3.3 V and 5 V compatible logic inputs
- ◆ RoHS compliant and lead free
- ◆ AEC-Q100 qualified

Package Information

Package	DFN5 \times 6-14L
Marking	WSD7020AF



Product Summary

Parameter	Symbol	Value
Max. DC supply voltage	V_S	35V
Operating voltage range	V_{NOM}	4.5-28V
On-state resistance (per channel, Typ.)	R_{ON}	23mohm
Nominal load current (one channel active)	$I_{L(NOM)1}$	7.5A
Nominal load current (All channels active)	$I_{L(NOM)2}$	5A
Typical current sense ratio ($I_L=3A$)	K	3160
Current limitation (typ.)	I_{LIMH}	24A
Supply current in standby mode	I_{STBY}	<2.0 μ A

Diagnostic Functions

- ◆ Multiplexed analog feedback of load current with high precision proportional current mirror
- ◆ Off-state open load detection
- ◆ Output short to V_S detection

Protection Functions

- ◆ Undervoltage shutdown
- ◆ Overvoltage clamp
- ◆ Load current limitation
- ◆ Output short-circuit protection
- ◆ Self limiting of fast thermal transients
- ◆ Protection against loss of ground and loss of V_S
- ◆ Thermal shutdown indication
- ◆ Electrostatic discharge protection

Typical Application Circuit

