

## WSD7050AD

Smart High-Side Power Switch Dual Channel, 55mΩ, DFN5×6-16L , 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

- ◆ Dual channel device
- ◆ Standby current <math><1.0\mu\text{A}</math>
- ◆ 3.3 V and 5 V compatible logic inputs
- ◆ RoHS compliant and lead free
- ◆ AEC-Q100 qualified

### Product Summary

Parameter	Symbol	Value
Max. DC supply voltage	$V_{CC}$	35V
Operating voltage range	$V_{NOM}$	4.5-28V
On-state resistance (per channel, Typ.)	$R_{ON}$	55mohm
Nominal load current (one channel active)	$I_{L(NOM)1}$	5A
Nominal load current (All channels active)	$I_{L(NOM)2}$	3.5A
Typical current sense ratio ( $I_{OUT}=2A$ )	K	1600
Current limitation (typ.)	$I_{LIMH}$	15A
Supply current in standby mode	$I_{STBY}$	<math><1.0\mu\text{A}</math>



### 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

