

WSQ7140AD

Smart High-Side Power Switch Quad Channel, 120mΩ, 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

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

Package Information	
Package	DFN5×6-16L
Marking	WSQ7140AD

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}	120mohm
Nominal load current (one channel active)	I _{L(NOM)1}	3A
Nominal load current (All channels active)	I _{L(NOM)2}	1.8A
Typical current sense ratio (I _{OUT} =1A)	K	665
Current limitation (typ.)	I _{LIMH}	6A
Supply current in standby mode	I _{STBY}	<2.0μA

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

