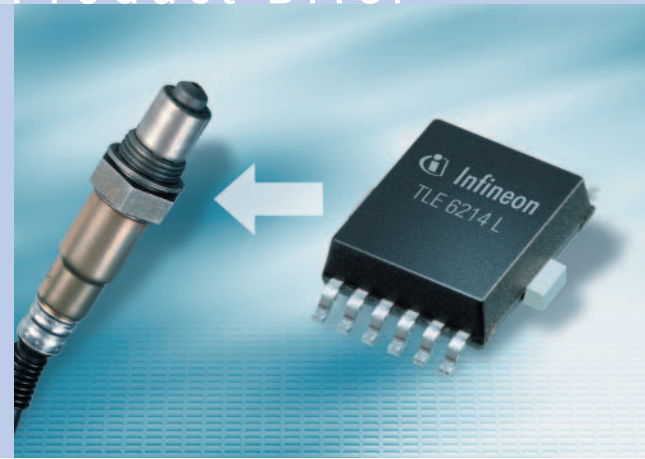


# TLE 6214L

Smart Dual Current Sense Switch with SPI



Smart Dual Current Sense Low-Side Switch in BCD technology (SPT<sub>4</sub>) with two open drain DMOS output stages. The TLE 6214L is protected by embedded protection functions and designed for automotive applications. The output stages can be controlled directly by parallel inputs for PWM applications (e.g. oxygen probe heaters, valves, solenoids, stepper motors) or by SPI. All output stages can provide a load current proportional sense signal. Diagnosis is done by an 8-bit SPI or by one status output per channel.

	TLE6214L
Package	P-DSO-12
Technology	SPT <sub>4</sub>
Clamping voltage [V]	48 - 60
Overtemp. shutdown [°C]	170 - 200
$R_{DS(ON), max.}$ (25°C) [Ω]	0.22
Output current (nom.) [A]	2 x 2
Output current (lim.) [A]	2 x 5 / 2 x 9
Features	
Overload shutdown	y
Overload switch-off delay	y
3.3 V $\mu$ C compatible in/out	y/n
Reverse current protect	y
Standby mode	y
Parallel control	2 of 2
Daisychain	y
Overload restart/latch	l
Overtemp. restart/latch	r/l selectable
Edge shaping	y
Turn-on time [μs]	program. 5/20

## Applications

- Drivers for:
  - O<sup>2</sup> probe heaters
  - Valves
  - Solenoids
  - Unipolar stepper motors

## Features & Benefits

- Overload protection
- DMOS overtemperature protection
- Overvoltage protection
- Open load detection in off-mode
- Current limitation
- Low quiescent current mode
- 3.3 V  $\mu$ C compatible input
- Electrostatic discharge (ESD) protection

## Specific Features

- Proportional load current sense
- Programmable overload behavior
- Programmable turn-on time
- Overtemperature warning via SPI
- 8-bit SPI (for diagnosis and control)
- Short to GND detection
- Open load detection in on mode

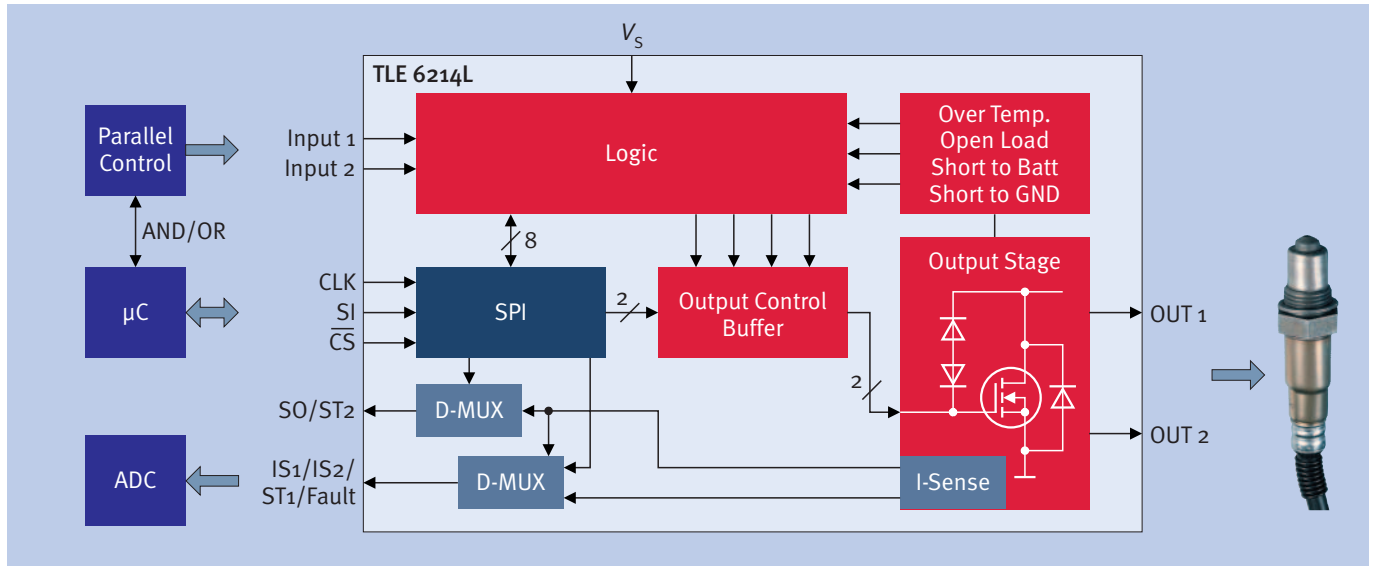
[www.infineon.com/multi-channel-switches](http://www.infineon.com/multi-channel-switches)

Automotive Power

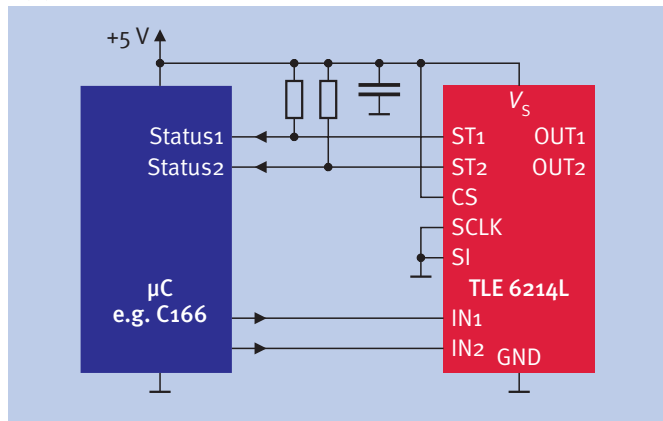


Never stop thinking.

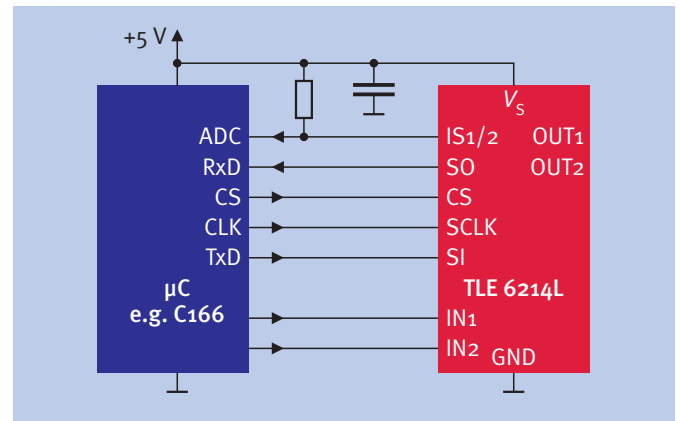
## Block Diagram



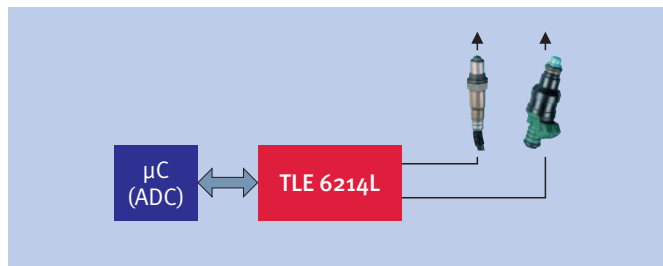
## Application with Parallel Control and Status Pins



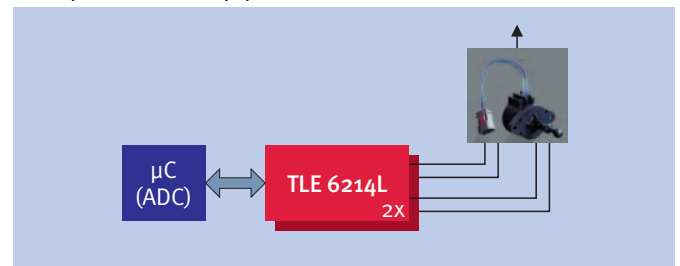
## Application with SPI and Analog Current Sense



## O<sup>2</sup> Probe Heater and Inductive Loads



## Unipolar Stepper Motor



Type	V <sub>S</sub> [V]	V <sub>DS(AZ)</sub> max. [V]	R <sub>DS(ON)</sub> typ. T <sub>J</sub> =25°C [mΩ]	I <sub>D(nom.)</sub> [A]	I <sub>L(lim.)</sub> min. [A]
TLE 6214L	4.5...5.5	60	2x180	2x2	2x5/2x9

For latest data sheets and application information see:  
<http://www.infineon.com/multi-channel-switches>  
<http://www.infineon.com/designlink>

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