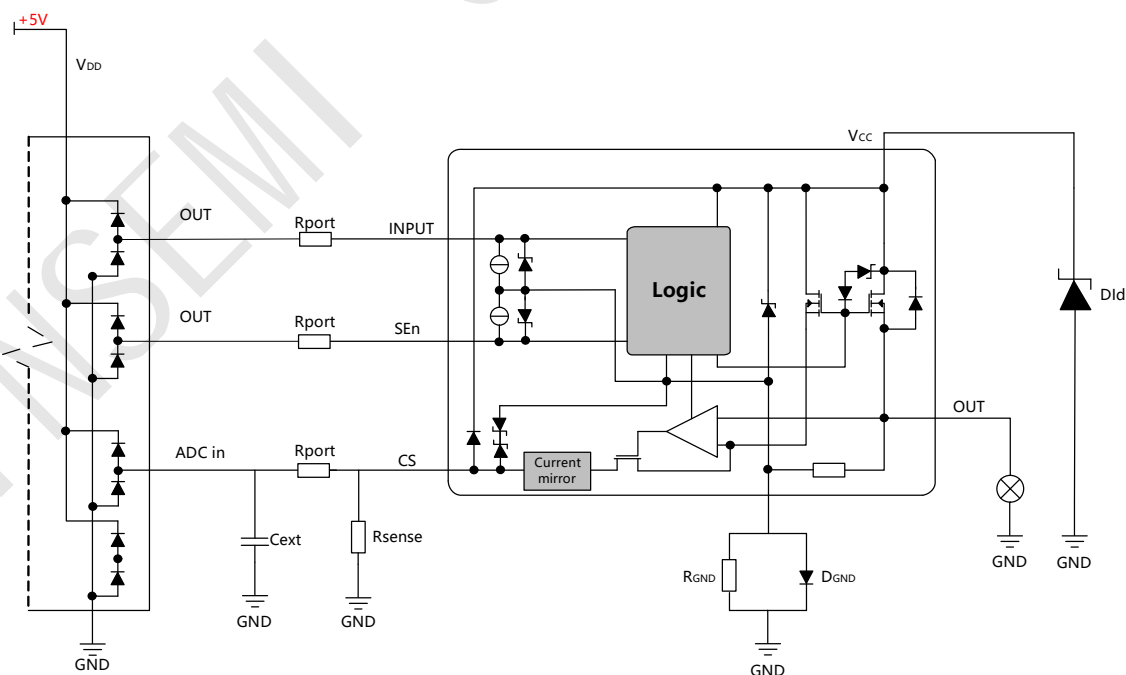


Features	General Description
<ul style="list-style-type: none"> ◆ Operating voltage range: 4.5V to 28V ◆ Load current limitation ◆ Output short-circuit protection ◆ Standby current <1.0μA ◆ On-state resistance Typ=145mΩ ◆ Thermal shutdown indication ◆ OFF-state open-load detection ◆ Overvoltage clamp ◆ Undervoltage protection ◆ Multiplexed analog feedback of load current with high precision proportional current mirror ◆ RoHS compliant and lead free 	<ul style="list-style-type: none"> ◆ WS7140S is single channel high-side drivers with current sense analog feedback for automotive applications, the devices are designed to drive 12 V automotive grounded loads through a 3 V and 5 V. ◆ WS7140S integrates advanced protective functions such as load current limitation, overload active management by power limitation and overtemperature shutdown. ◆ A dedicated multifunction multiplexed analog output pin delivers sophisticated diagnostic functions including high precision proportional load current sense, in addition to the detection of overload and short circuit to ground, short to V_{CC} and OFF-state open-load. ◆ A sense enable pin allows OFF-state diagnosis to be disabled during the module low power mode as well as external sense resistor sharing among similar devices. ◆ WS7140S is available in ESOP-8L package.
Application	
<ul style="list-style-type: none"> ◆ All types of automotive resistive, inductive and capacitive loads ◆ Specially intended for automotive signal lamps 	

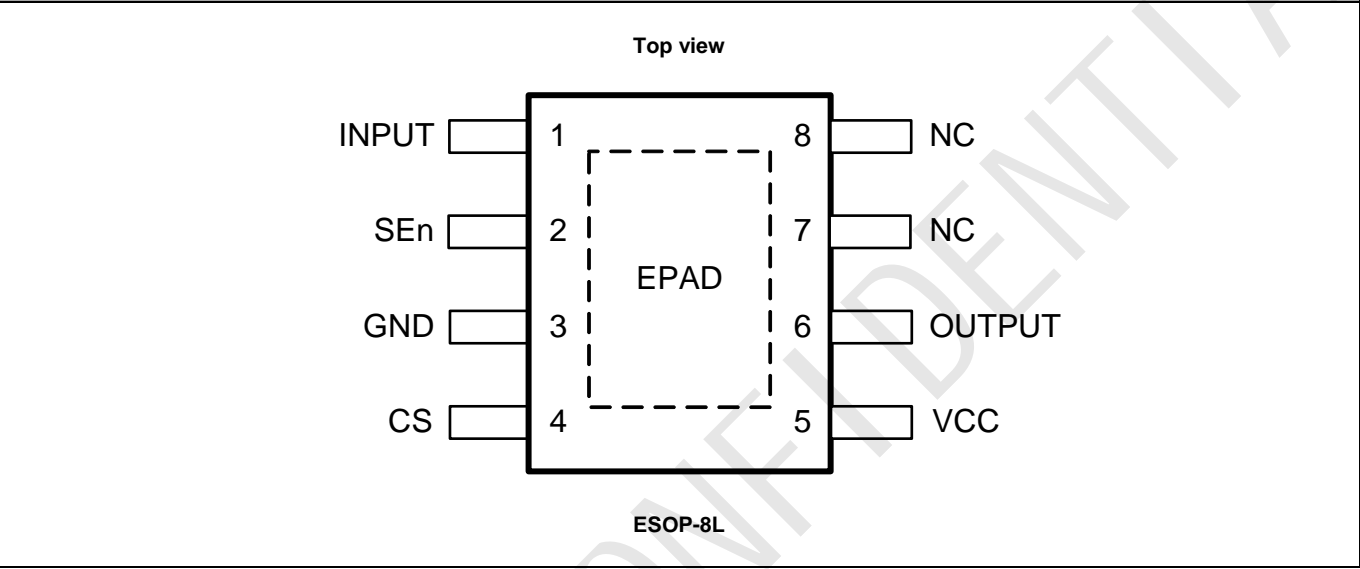
Typical Application Circuit



Ordering Information

Package	Top Mark	Part No.
8-Pin ESOP-8L, Pb-free	WS7140S XXYMXX	WS7140S

Pin Configuration



Pin Description

Pin Name	Pin NO.	Pin Description
INPUT	1	Voltage controlled input pin with hysteresis, compatible with 3 V and 5 V CMOS outputs. It controls output switch state.
SEn	2	Active high compatible with 3 V and 5 V CMOS outputs pin, it enables the CS diagnostic pin.
GND	3	Ground connection. Must be reverse battery protected by an external diode / resistor network.
CS	4	Multiplexed analog sense output pin; it delivers a current proportional to the load current.
V _{CC}	5	Battery connection.
OUTPUT	6	Power outputs.
NC	7/8	No connect.
EPAD	EPAD	Exposed pad for thermal dissipation enhancement. Must be soldered on the large ground plane on the PCB to increase the thermal dissipation. The pad must be connected to GND electrically.