

### Product Overview

XS2801 is a primary-side CV/CC controlled flyback regulator. It integrates a 200V/0.5Ω power switch, eliminating the need for optocouplers and secondary feedback loops, thereby reducing overall system cost. Both constant voltage and constant current outputs are achieved through primary-side sensing and control, featuring dedicated CV and CC control modules.

For constant current mode, XS2801 adjusts the primary-side current by varying the  $R_{CS}$  resistor connected to the CS pin, allowing regulation of output current and power. For constant voltage mode, the device employs multi-mode operation to achieve high performance and efficiency. It operates in PFM mode under constant current and heavy load conditions, switching to PWM and PFM modes under light to moderate loads.

XS2801 includes comprehensive protection features such as soft start, cycle-by-cycle current limiting, over-voltage protection (OVP), VDD clamping, under-voltage lockout

(UVLO), and over-temperature protection (OTP).

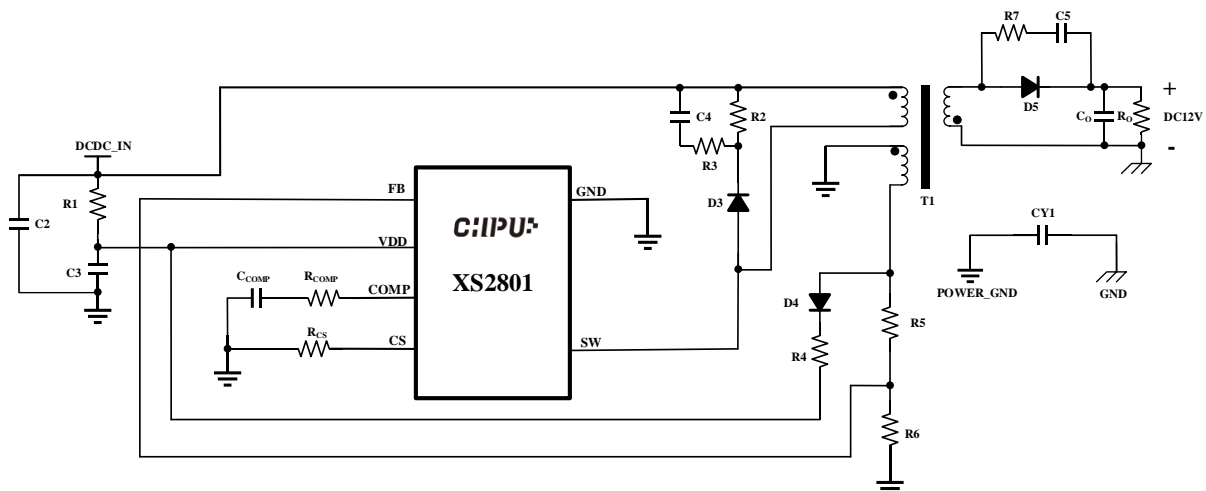
### Features

- ◆ Primary-side CV and CC control
- ◆ Low start-up current: 15 uA
- ◆ Integrated 200V/0.5Ω power switch
- ◆ CV and CC regulation
- ◆ Adaptive primary-side peak current adjustment
- ◆ Soft start feature
- ◆ Built-in leading-edge blanking (LEB)
- ◆ Cycle-by-cycle current limiting
- ◆ Under-voltage lockout (UVLO)
- ◆ VDD over-voltage protection (OVP)
- ◆ Over-temperature protection (OTP)
- ◆ VDD clamping

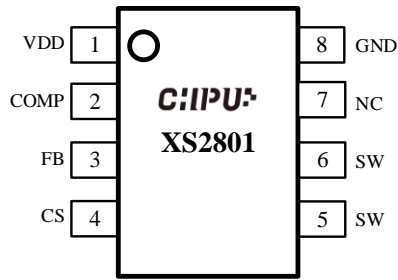
### Typical Application

- ◆ IP camera
- ◆ VoIP

### Typical Application Diagram



**Figure Typical Application Circuit**



**Pin List**

Pin No.	Pin Name	Function
1	VDD	Power supply pin, connects to the startup resistor and auxiliary power circuit.
2	COMP	Loop compensation pin, connects an RC network to ground to stabilize the control loop.
3	FB	Feedback voltage pin, monitors changes in output voltage.
4	SCS	Switching current detection signal input pin, connects to the current sensing resistor.
5/6	SW	Drain of the power switch.
7	NC	NC pin.
8	GND	Power ground and analog ground.

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