

DESCRIPTION

RS2112 is a high performance offline PSR controller for low power AC/DC charger and adapter applications. It operates in primary- side

sensing and regulation. Consequently, opto-coupler and TL431 could be eliminated. Proprietary Constant Voltage (CV) and Constant

Current (CC) control is integrated as shown in the figure below.

In CC control, the current and output power setting can be adjusted externally by the sense resistor R_s at CS pin. In CV control, PFM operations are utilized to achieve high performance and high efficiency. In addition, good load regulation is achieved by the built-in cable drop compensation. The chip consumes very low operation current (typical $350\mu A$), it can achieve less than $30mW$ standby power to meet strict standby power standard.

RS2112 offers comprehensive protection coverage with auto-recovery features including Cycle-by-Cycle current limiting, VDD over voltage protection, feedback loop open protection, short circuit protection, built- in leading edge blanking, VDD under voltage lockout (UVLO), etc.

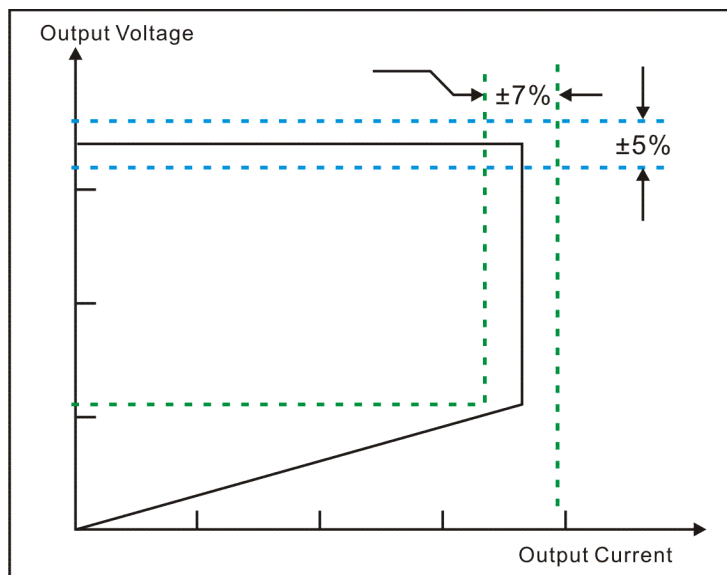
FEATURES

- $\pm 5\%$ constant voltage regulation at universal AC input
- High precision constant current regulation at universal AC input
- Primary-side sensing and regulation without TL431 and opto-coupler
- Programmable CV and CC regulation
- Built-in primary winding inductance compensation
- Programmable cable drop compensation
- Built-in 700V power BJT
- Ultra low start-up current (Typ. $1\mu A$)
- VDD over voltage protection
- Built-in feedback loop open protection
- Built-in short circuit protection
- Built-in leading edge blanking (LEB)
- Cycle-by-cycle current limiting
- VDD under voltage lockout with hysteresis (UVLO)
- SOP-8 green packaging

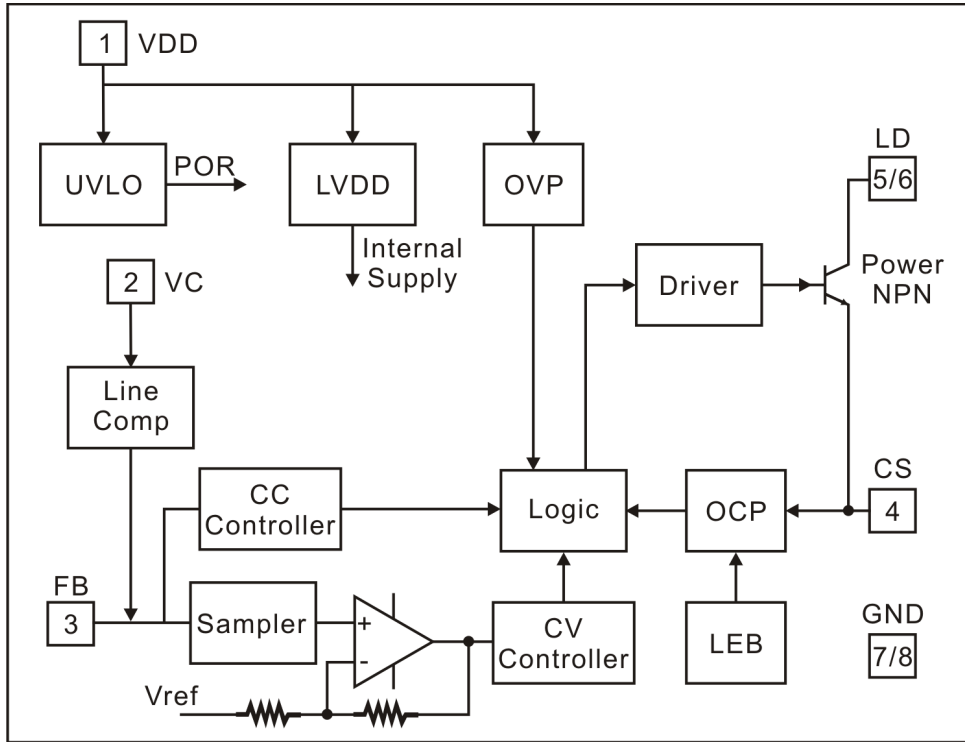
APPLICATIONS

- Low power AC/DC offline SMPS
- $<5W$ LED Lighting for bulbs and spot light

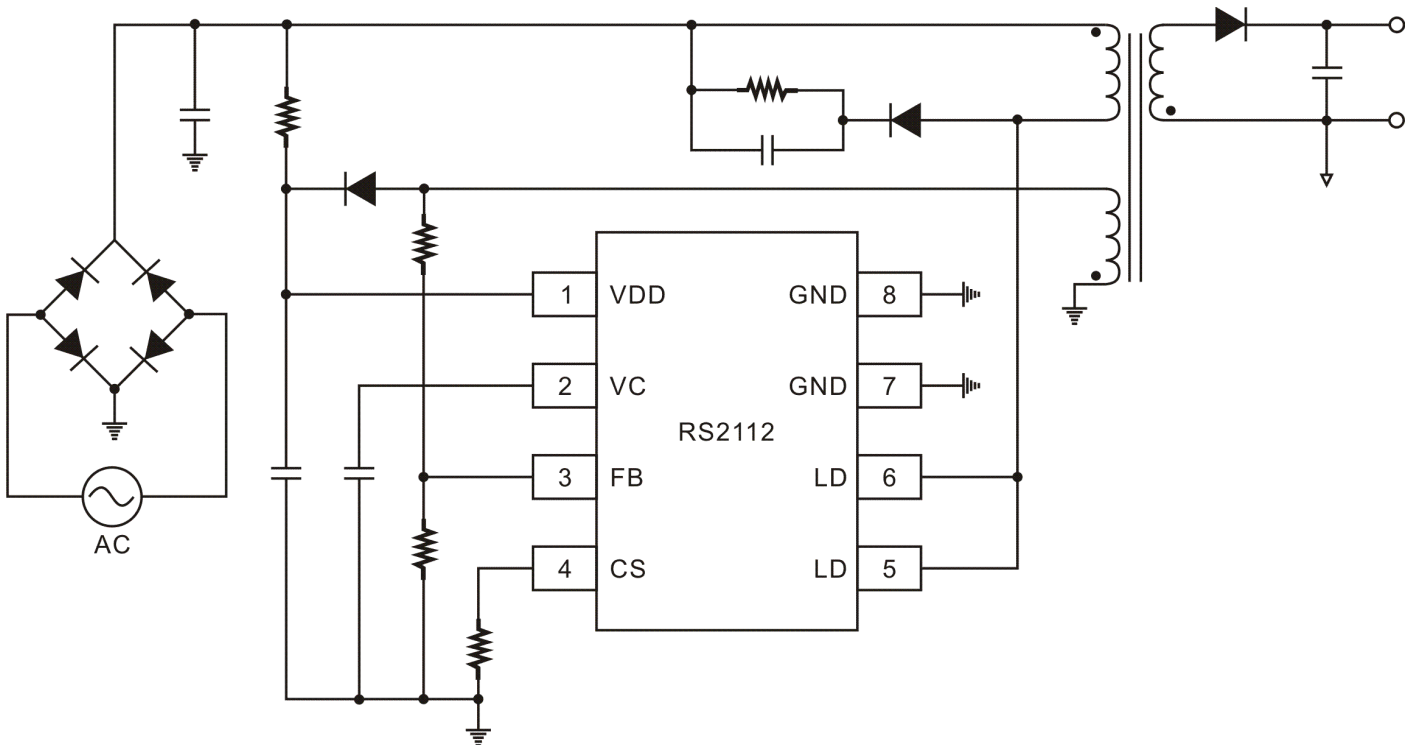
TYPICAL CC/CV CURVE



BLOCK DIAGRAM



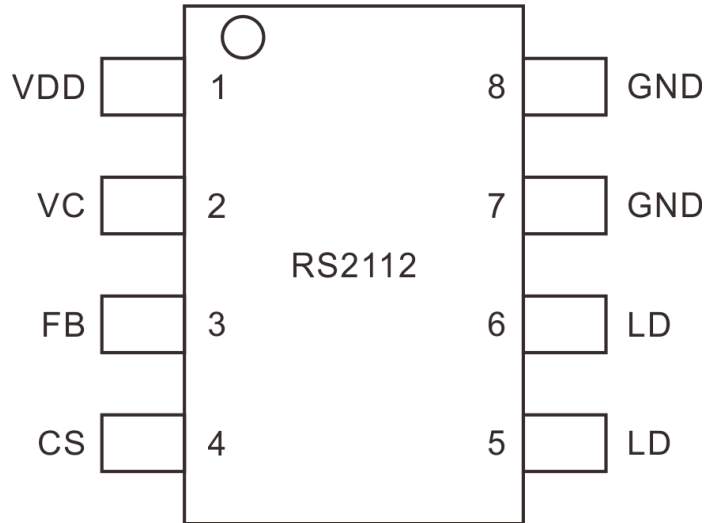
TYPICAL APPLICATION



ORDER INFORMATION

Device	Device Code
RS2112 Y Z	Y is package & Pin Assignments designator: S: SOP-8 Z is Lead Free designator: P: Commercial Standard, Lead (Pb) Free and Phosphorous (P) Free Package G: Green (Halogen Free with Commercial Standard)

PIN ASSIGNMENTS



PIN DESCRIPTION

Pin Name	Description	Pin No.
VDD	Supply voltage pin.	1
VC	Low pass filter capacitor for cable compensation.	2
FB	Voltage feedback pin. Output current of this pin could controls the PWM duty cycle, OLP and SCP.	3
CS	Current sense pin, a resistor connects to sense the NPN current.	4
LD	The connector of NPN.	5
		6
GND	GND Pin.	7
		8

IMPORTANT NOTICE

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Princeton Technology Corp.
2F, 233-1, Baociao Road,
Sindian Dist., New Taipei City 23145, Taiwan
Tel: 886-2-66296288
Fax: 886-2-29174598
<http://www.princeton.com.tw>