

DESCRIPTION

RS2120 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 μ A), it can achieve less than 30mW standby power to meet strict standby power standard.

RS2120 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

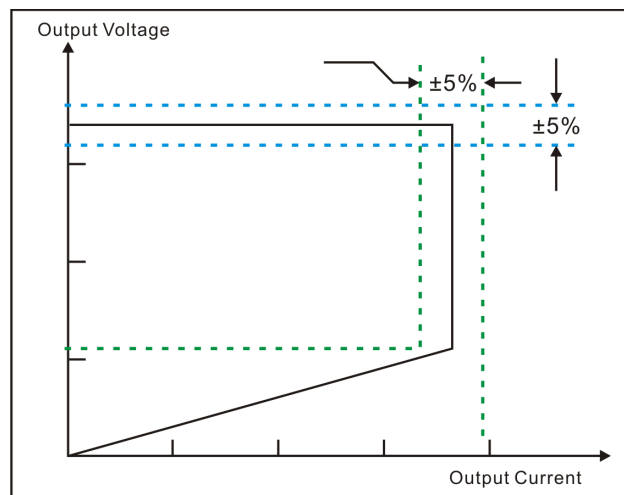
- $\pm 5\%$ constant voltage regulation at universal AC input
- High precision constant current regulation at Universal AC input
- Primary-side sensing and regulation without TL431 and opto-coupler
- Programmable CV and CC regulation
- Built-in primary winding inductance compensation
- Programmable cable drop compensation
- Driver BJT switch
- Ultra low start-up current (Typ. 1 μ 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)

APPLICATIONS

Low Power AC/DC offline SMPS for

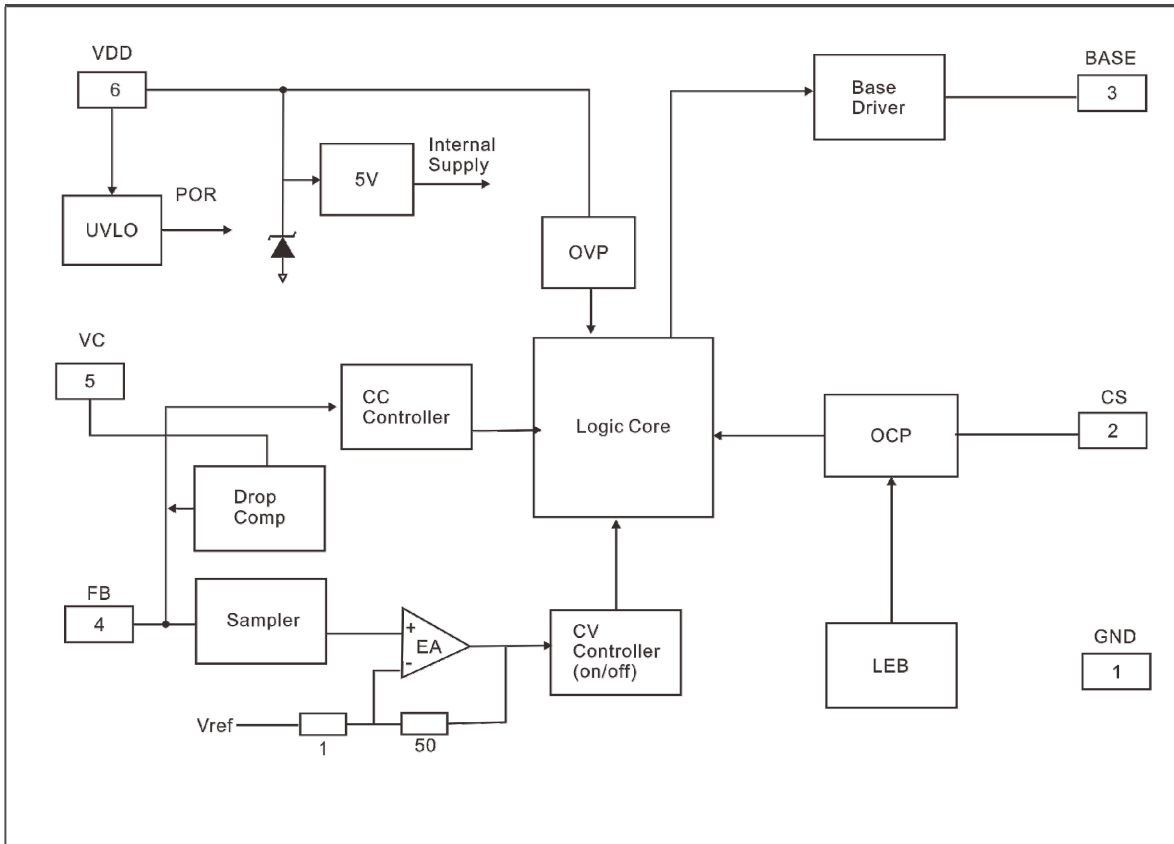
- Cell phone charger
- Digital cameras charger
- Small power adaptor
- Auxiliary power for PC, TV etc.
- Linear regulator/RCC replacement

TYPICAL CC/CV CURVE

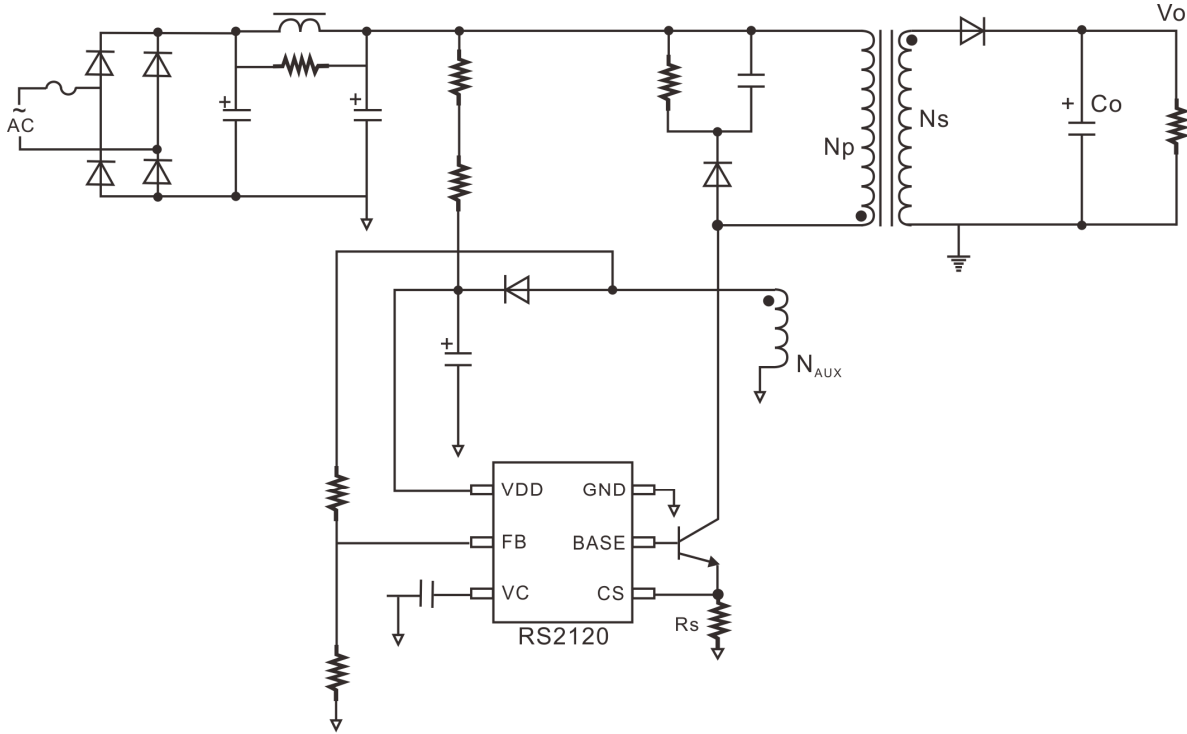




BLOCK DIAGRAM



APPLICAION CIRCUIT

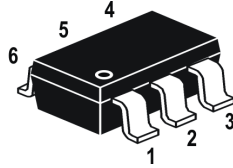


ORDER INFORMATION

Device	Device Code
RS2120 Y Z	<p>Y is package & Pin Assignments designator: N : SOT-23-6L</p> <p>Z is Lead Free designator: P: Commercial Standard, Lead (Pb) Free and Phosphorous (P) Free Package G: Green (Halogen Free with Commercial Standard)</p>

PIN ASSIGNMENTS

SOT-23-6L



PIN DESCRIPTION

Pin Name	Description	Pin No.
GND	Ground.	1
CS	Current sense input.	2
BASE	Base drive with current limit for power BJT.	3
FB	The voltage feedback from auxiliary winding. Connected to resistor divider from auxiliary winding reflecting output voltage.	4
VC	Low pass filter capacitor for cable compensation.	5
VDD	Power supply.	6



IMPORTANT NOTICE

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