

DESCRIPTION

RS2542 is a highly integrated current mode PWM controller. It built in patent 700V High voltage startup, optimized for high performance, exhibit extra low standby power consumption (<50mW) and costs effective offline flyback converter applications.

PWM switching frequency at normal operation is internally fixed. At no load or light load condition, it operates in burst mode to minimize switching loss. Less than 50mW standby power consumption and very high conversion efficiency is thus achieved. Patent high voltage startup is implemented in RS2542, which features with short startup time and extra low standby current.

RS2542 offers rich protections with auto-recovery including Cycle-by-Cycle current limiting (OCP), over load protection (OLP), V_{DD} under voltage lockout (UVLO), and over temperature protection (OTP), V_{DD} over voltage protection (OVP). It also provides the protection with latched shut down including V_{DD} over voltage protection. Excellent EMI performance is achieved with RS2542 proprietary frequency burst technique. The frequency at below 22KHz is minimized to avoid audible noise during operation.

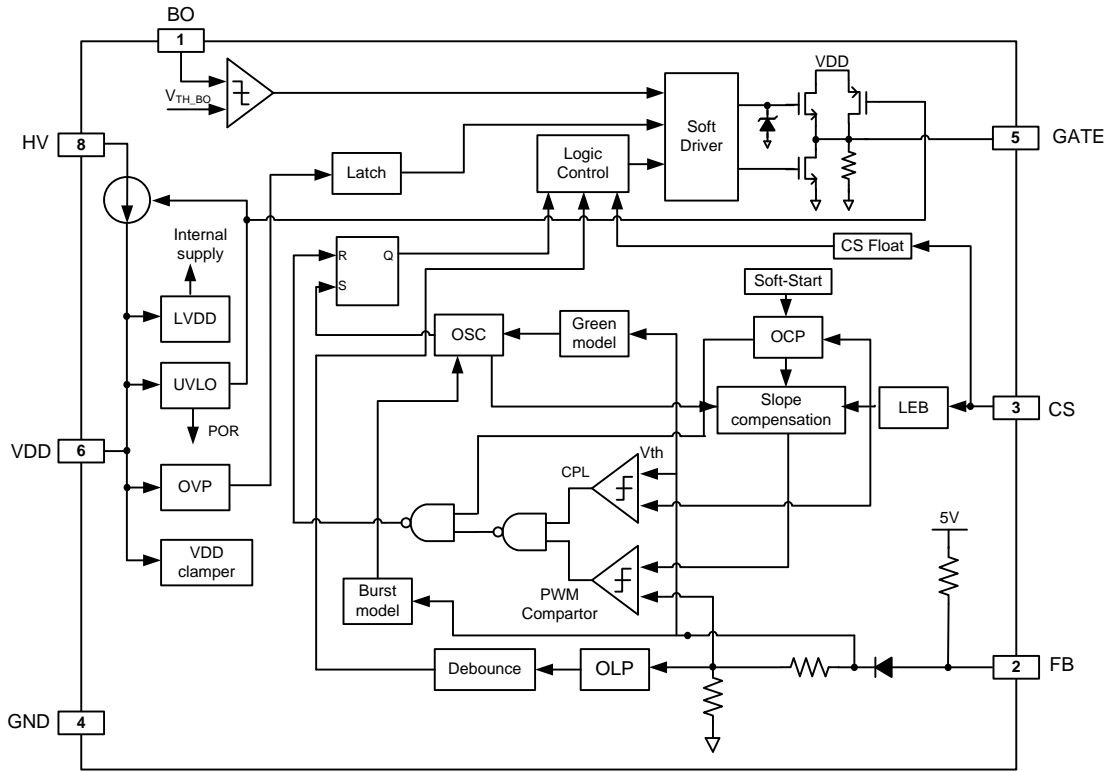
APPLICATIONS

- Offline AC/DC flyback converter for
 - AC/DC adapter
 - PDA power supplies
 - Auxiliary power supply for pc and server
 - Open-frame SMPS

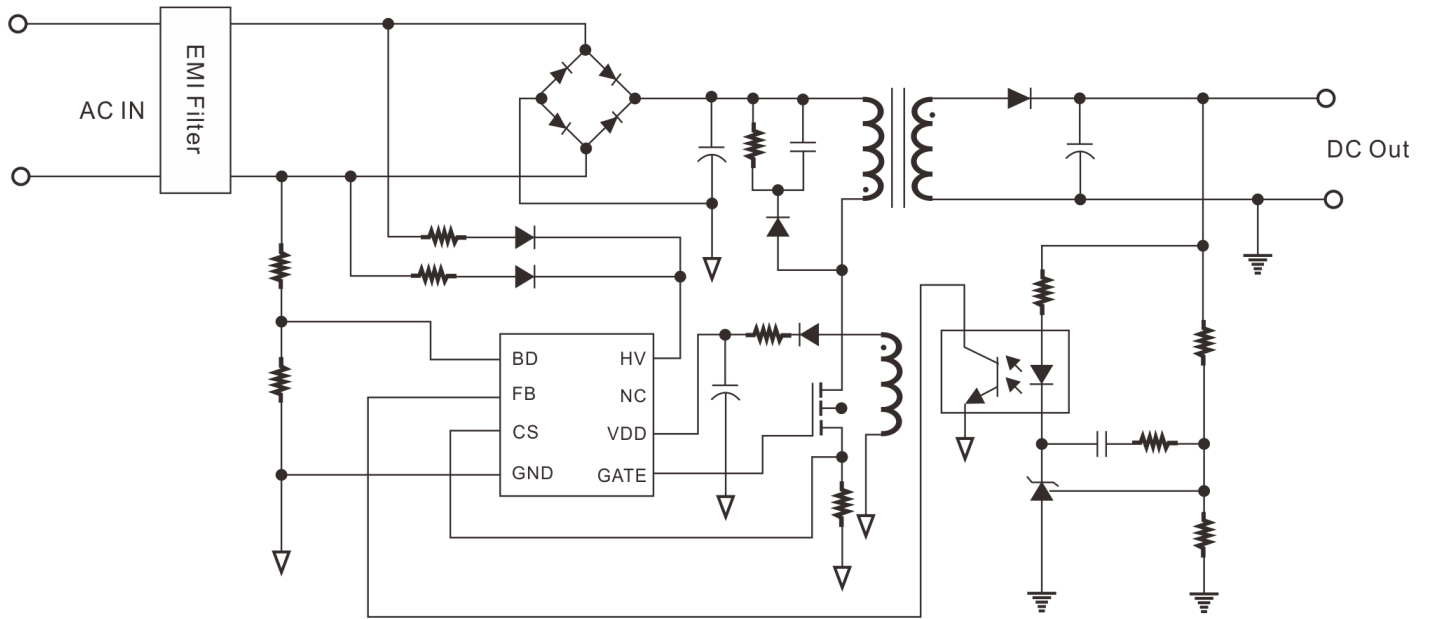
FEATURES

- Built-in 700V high voltage startup
- Patent high voltage startup technique
- Extra low standby (<50mW)
- Power on soft startup
- Frequency spreading to minimize EMI
- Audio noise free operation
- Fixed 65KHz switching frequency
- Brownout function
- Comprehensive protection
 - V_{DD} under voltage lockout with hysteresis (UVLO)
 - Cycle-by-cycle over current protection (OCP)
 - Overload protection (OLP) with Auto-recovery
 - Over temperature protection (OTP) with auto-recovery
 - V_{DD} over voltage protection (OVP) with auto-recovery

BLOCK DIAGRAM



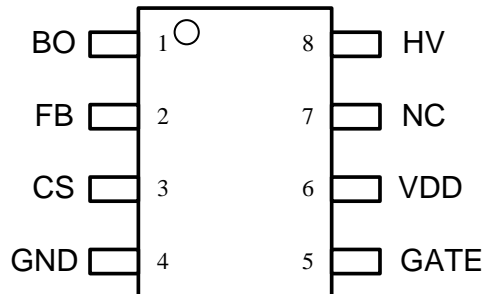
APPLICATION CIRCUIT



ORDER INFORMATION

DEVICE	DEVICE CODE
RS2542 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

PIN CONFIGURATION



PIN DESCRIPTION

Pin Name	Description	Pin No.
BO	Connected resistors for brownout protection	1
FB	Feedback input pin. The PWM duty cycle is determined by voltage level into this pin and the current-sense signal at CS pin.	2
CS	Current sense input.	3
GND	Ground	4
GATE	Gate driver output. Drive the power MOSFET.	5
VDD	Power Supply	6
NC	No Connect	7
HV	Connected to the line input or bulk capacitor via resistors for startup.	8

IMPORTANT NOTICE

Princeton Technology Corporation (PTC) reserves the right to make corrections, modifications, enhancements, improvements, and other changes to its products and to discontinue any product without notice at any time.

PTC cannot assume responsibility for use of any circuitry other than circuitry entirely embodied in a PTC product. No circuit patent licenses are implied.

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>