

SSC9510 Series

Controller IC for Current Resonant Type Switching Power Supply with Half-Bridge Resonance, High Efficiency and Low Noise

■ General Descriptions

The SSC9510 series products are controller ICs, incorporating a floating drive circuit for half-bridge type resonance. The product achieves high efficiency and low noise power supply systems by the ZVS and ZCS. The product is recommended for high-efficiency small and standardized power supplies because of easy circuit designs with few external components.



DIP-16

■ Features

- Soft-Switched Multi-Resonant Zero Current Switch (SMZ)
The zero-current switching (ZSC) and zero-voltage switching (ZVS) of half-bridge type resonance achieve the high efficiency and low noise systems.
- Automatic Dead Time Adjustment Function for Wide Resonant Conditions
- Burst-Oscillation Function
The function enables the stable output control at no load to light load conditions and improves the efficiency.
- Soft-Start Function
- Brown-In / Brown-Out Function
The function enables the oscillation start /stop by externally rated input voltage and makes protections at low input voltage.
- External Latch Protection (ELP)
The function enables the latch shutdown by external signal.
- Various Protections
 - Overcurrent Protection (OCP)----- Auto-Restart
Three-step protections depending on overcurrent status
 - Overload Protection (OLP) ----- Latch Shutdown
 - Overvoltage Protection (OVP) ----- Latch Shutdown
 - External Latch Protection (ELP) ----- Latch Shutdown
 - Thermal Shutdown Protection (TSD) ----- Latch Shutdown



SOP-18

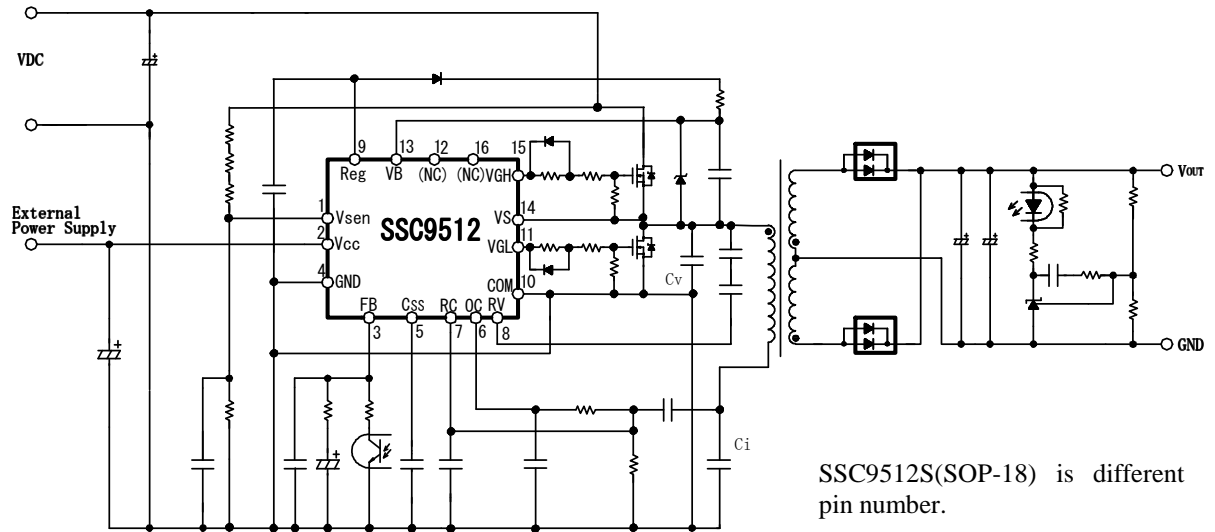
■ Applications

Switching Power Supplies for
 Digital Consumer Equipment; LCD-TVs, PDP-TVs, etc.,
 OA Equipment; Servers, Multi-Function Printers, etc.,
 Industry Machines, Communication Devices, Others

■ Product Lineup

Product No	Package
SSC9512	DIP-16
SSC9512S	SOP-18

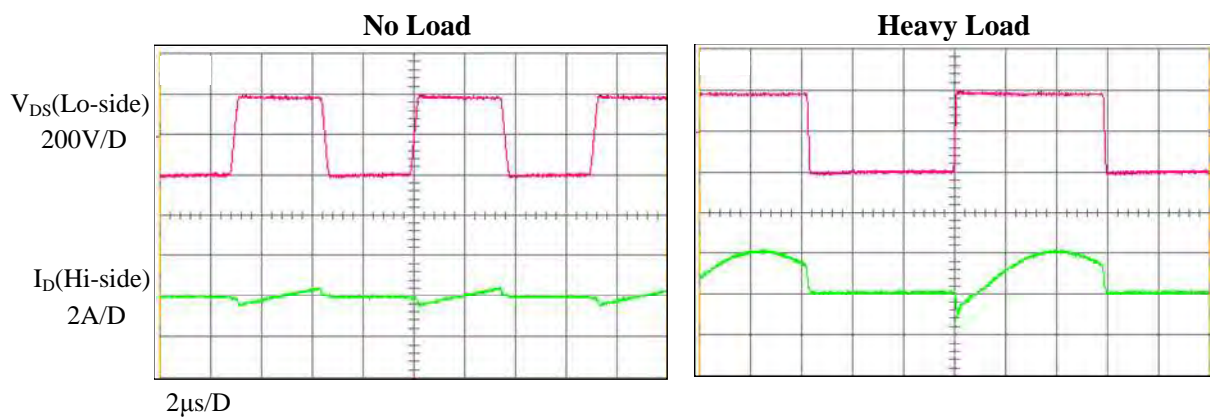
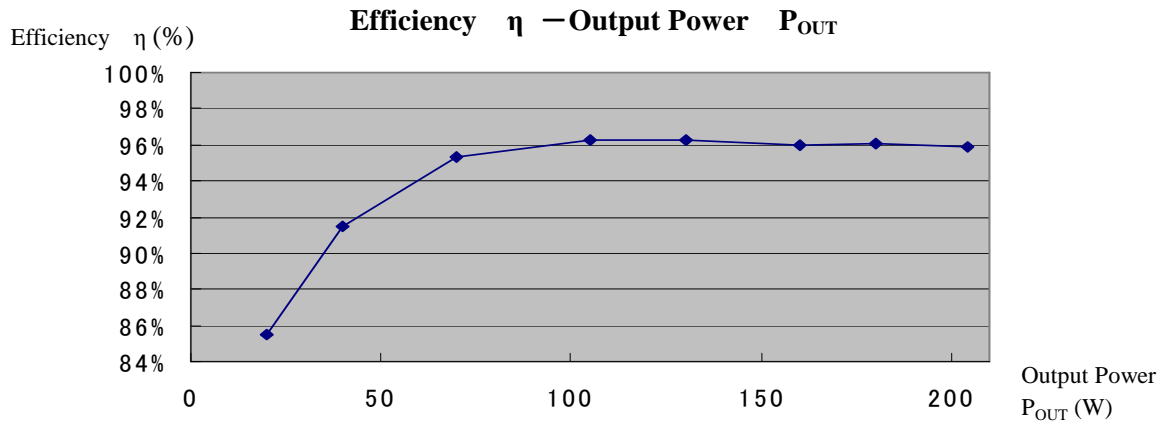
■ Typical Application Circuit



■ Typical Electrical Characteristics and Operation Waveforms

Power Supply Characteristics

Input : 380VDC, Output : 24V/8.5A (204W), with Power MOSFET $R_{DS(ON)}$: 0.56 Ω



Warning

- The contents in this document are subject to changes, for improvement and other purposes, without notice. Make sure that this is the latest version of the document before use.
- The operation and circuit examples in this document are provided for reference purposes only. Sanken assumes no liability for violation of industrial property, intellectual property, or other rights of Sanken or third parties, that stem from these examples.
- The user must take responsibility for considering and determining which objects the products in this document are used with.
- Although Sanken will continue to improve the quality and reliability of its products, semiconductor products, by their nature, have certain fault and failure rates. The user must take responsibility for designing and checking to secure the device and system so that a part failure may not lead to human injury, fire, damages, or other losses.
- The contents in this document must not be transcribed or copied without Sanken's written consent.