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.

■ 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
  - Overload Protection (OLP) ------------------------------------ Latch Shutdown
  - Overvoltage Protection (OVP) ---------------------------------- Latch Shutdown
  - External Latch Protection (ELP) ------------------------------- Latch Shutdown
  - Thermal Shutdown Protection (TSD) ----------------------------- Latch Shutdown

■ 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

<table>
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<th>Product No</th>
<th>Package</th>
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<tbody>
<tr>
<td>SSC9512</td>
<td>DIP-16</td>
</tr>
<tr>
<td>SSC9512S</td>
<td>SOP-18</td>
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■ Typical Application Circuit

![Application Circuit Diagram]

SSC9512S(SOP-18) is different pin number.

■ Typical Electrical Characteristics and Operation Waveforms

Power Supply Characteristics

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

Efficiency $\eta$ (%) - Output Power $P_{OUT}$

No Load

- $V_{DS(Lo-side)}$: 200V/D
- $I_D(Hi-side)$: 2A/D

2µs/D

Heavy Load

- $V_{DS(Lo-side)}$: 200V/D
- $I_D(Hi-side)$: 2A/D

2µs/D

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