

# STR-L6400 Series

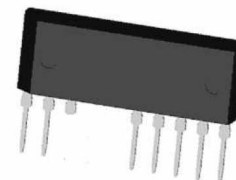
**Power IC for Quasi-Resonant Type Switching Power Supply  
with High Efficiency, Low Noise and Low Standby Power  
in Full Load Range**

**Low-Height and Enough Creepage Isolation (>6mm)  
between High and Low Voltage Terminals**

## ■ General Descriptions

The STR-L6400 series products are power ICs for quasi-resonant switching type power supplies, incorporating a power MOSFET and a controller IC. The product achieves high efficiency and low noise power supply systems across the full load range, by the low standby power, the quasi-resonant operation, the bottom-skip quasi-resonant operation, and the burst-oscillation. The product is recommended for the systems requiring low-height and enough clearance and creepage isolation between high and low voltage terminals.

The STR-Y6400 series products are the different package (TO-220F) versions.



**SIP10L**

## ■ Features

- Multi-Mode Control  
The operation mode switching with four steps according to load conditions achieves the optimal high efficiency and low noise power supply systems across the full load range.
  - In Standby: Auto Standby (Auto Burst-Oscillation)
  - Under Low to Middle Load Conditions: 1 or 2 Bottom-Skip Quasi-Resonant Operation (Bottom-Skip QR)
  - Under Middle to Rating (or Heavy) Load Conditions: Quasi-Resonant Operation (QR)
- Current-Mode Control
- Bottom-Skip Function with Delay Time Setting, enabling stable switching
- Built-in Startup Circuit, enabling low power consumption
- Auto-Standby Function with Burst-Oscillation, enabling low standby power (Input power  $P_{IN} < 100\text{mW}$  at no load)
- Soft-ON Function, preventing the audible noise from transformer, during the standby operation (burst-oscillation) and the dynamic load change.
- SIP10L Package (SanKen designation : STA10L), recommended for auxiliary power supplies of White Goods  
Straight lead pitch: 2.54mm, Height over PCB: < 12mm  
Clearance and Creepage Isolation between high and low voltage terminals: 6.5mm (3 pins removed)
- Soft-Start Function
- Step-Drive Function, reducing switching noise
- Leading Edge Blanking Function
- External ON/OFF Function
- Built-in Avalanche Energy Guaranteed High-Voltage Power MOSFET
- Various Protections
  - Overcurrent Protection (OCP)----- Pulse-by-Pulse with AC Input Compensation Function
  - Overload Protection (OLP) ----- Latch Shutdown or Auto-Restart Option by changing external components
  - Overvoltage Protection (OVP) ----- Latch Shutdown

## ■ Applications

Switching Power Supplies for

Home Appliances (White Goods), Digital Consumer Equipment, OA Equipment, Industry Machines, Communication Devices, Others

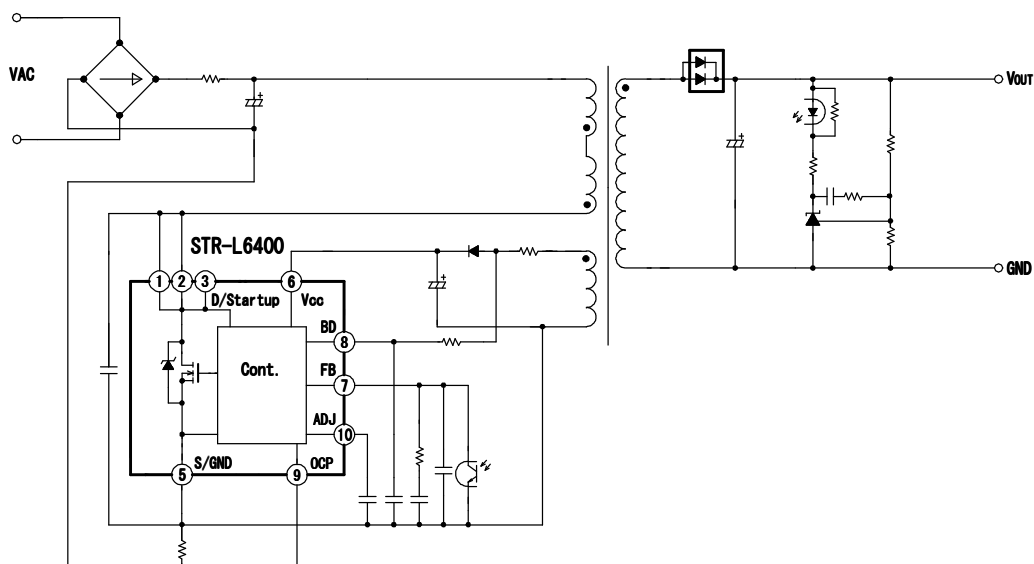
## ■ Product Lineup

| Product No | MOSFET<br>$V_{DS}$ MIN (V) | $R_{DS(ON)}$<br>MAX ( $\Omega$ ) | $P_{OUT}$ (Note 1,2)<br>100V / 220V |
|------------|----------------------------|----------------------------------|-------------------------------------|
| STR-L6472  | 850                        | 6.5                              | 15W / 25W                           |

Note 1: The maximum output power is derived from thermal specifications. The actual output power may be available around 120 –140% of the above values, respectively, but may be limited by ON duty setting on transformer design or lower output voltage.

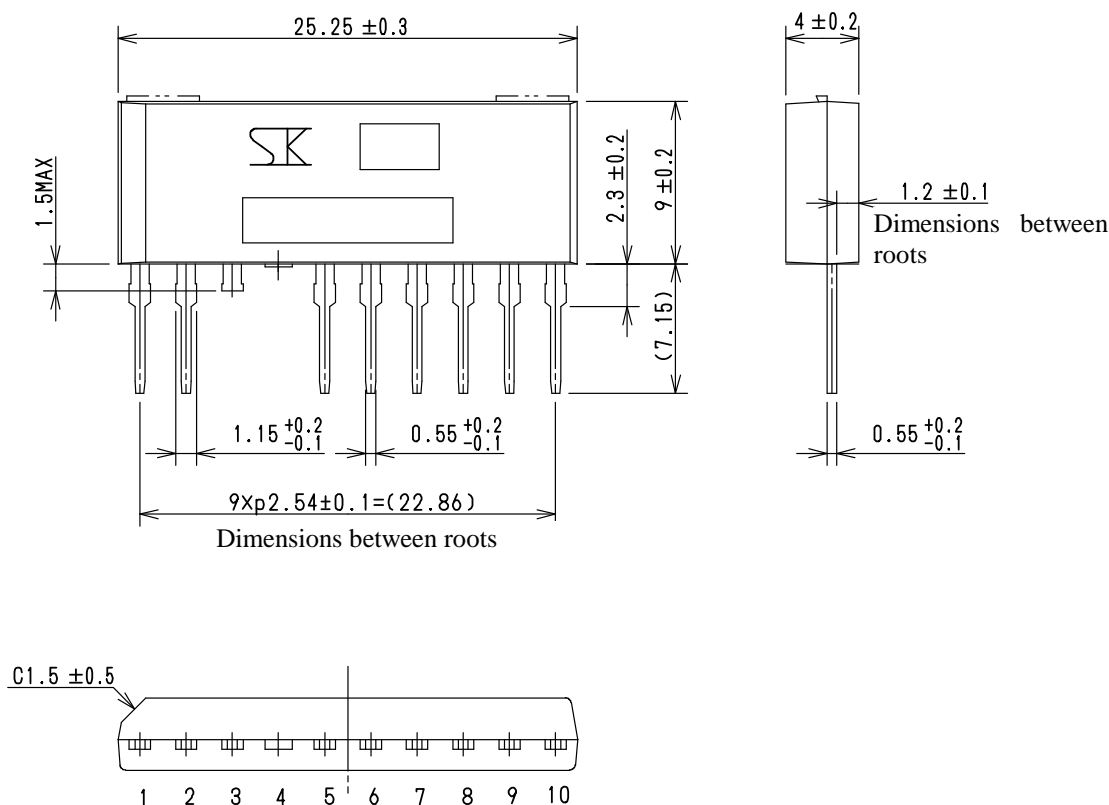
Note 2: The condition of the maximum output power is “without heat sink”.

## ■ Typical Application Circuit



## ■ Package Information

SIP10L (Sanken designation : STA10L)



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