

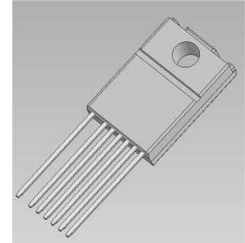
STR-Y6400 Series

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

■ General Descriptions

The STR-Y6400 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 STR-L6400 series products are the different package (SIP-10) versions.



TO-220F-7

■ 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.

● 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

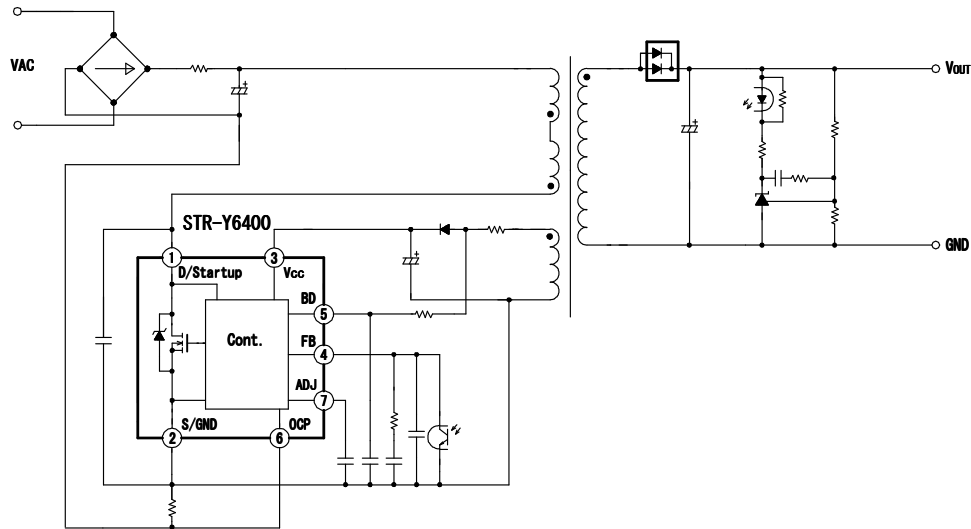
Switching Power Supplies for

Digital Consumer Equipment; LCD-TVs, BD/DVD Players/Recorders, etc., Home Appliance (White Goods), OA Equipments, Industry Machines, Communication Devices, Others

■ Product Lineup

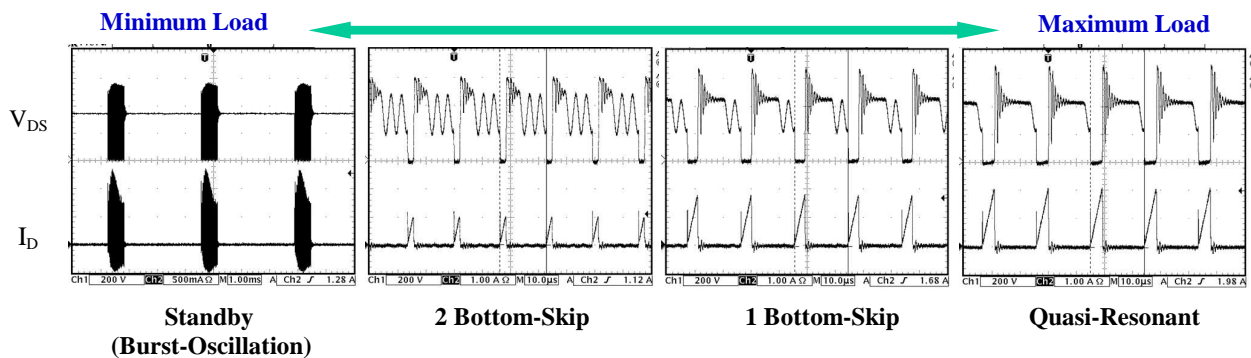
Product No.	MOSFET $V_{DSS(MIN)}$ (V)	$R_{DS(ON)(MAX)}$ (Ω)
STR-Y6453	650	1.8
STR-Y6456		0.73
STR-Y6473	850	3.6
STR-Y6476		1.3

■ Typical Application Circuit

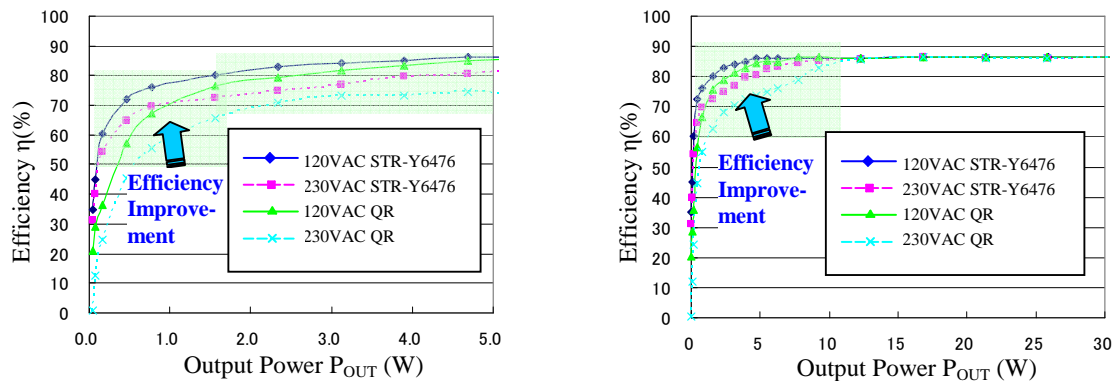


■ Typical Operation Waveforms & Typical Electrical Characteristics

Operation Mode Transitions



Efficiency Comparison of Multi Mode vs. Quasi-Resonant Mode



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