

STR-Y6700 Series

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

■ General Descriptions

The STR-Y6700 series products are power ICs for quasi-resonant (QR) switching mode power supplies, incorporating a power MOSFET and a controller IC.

The product achieves high efficiency and low noise systems, by automatic switching of Auto-Standby operation under light load conditions, QR operation and Bottom-Skip QR operation in normal operation.

The product easily achieves high cost-performance power supply systems with few external components.



TO-220F (FMY207)

■ Features

Multi-Mode Control

The automatic operation mode switching with three steps according to load conditions achieves the optimal power supply systems with high efficiency and low noise across full load range.

- · In Standby------ Auto Standby Operation (Burst-Oscillation)
- · Under Low to Middle Load Conditions ------ Bottom-Skip Quasi-Resonant Operation (Bottom-Skip QR)
- Under Middle to Rating (or Heavy) Load Conditions -- Quasi-Resonant Operation (QR)
- Current-Mode Control
- Built-in Startup Circuit, enabling Low Power Consumption
- Auto-Standby Function with burst-oscillation, enabling low standby power Input Power at no load : $P_{IN} < 30 \text{mW}$ (100VAC), $P_{IN} < 50 \text{mW}$ (240VAC)
- Soft-ON Function, preventing the audible noise from transformer at standby (Burst-Oscillation)
- Built-in Soft-Start Function
- Built-in Bias Assist Function
- Overcurrent Protection (OCP) with AC Input Compensation Function
- Built-in Leading Edge Blanking Function
- Built-in High-Voltage Power MOSFET with Avalanche Energy Guaranteed
- Protection Functions
 - Overcurrent Protection (OCP)-----Pulse-by-Pulse
 - · Overload Protection (OLP)-----Latch Shutdown
 - · Overvoltage Protection (OVP) -----Latch Shutdown
 - · Thermal Shutdown Protection (TSD) ----- Latch Shutdown

■ Applications

Switching Power Supplies for

 $Digital\ Consumer\ Equipments:\ LCD-TVs,\ BD\ /\ DVD\ Players\ /\ Recorders,\ etc.,$

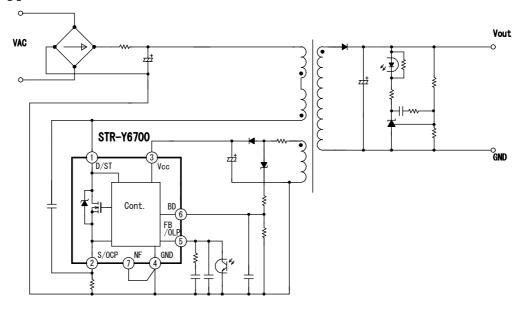
Home Appliance (White Goods), OA Equipments, Industry Machines, Communication Equipments, Others

■ Product Lineup

Product No.	MOSFET V _{DSS} (MIN) (V)	$\begin{array}{c} R_{DS(ON)}(MAX) \\ (\Omega) \end{array}$
STR-Y6735	500	0.8
STR-Y6753	650	1.9
STR-Y6754		1.4

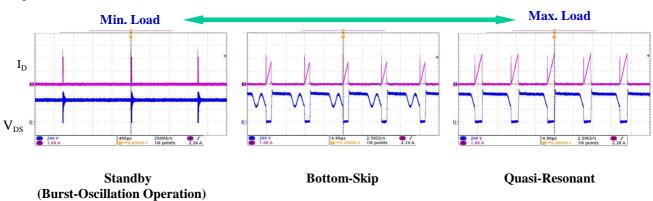
Product No.	$\begin{array}{c} MOSFET \\ V_{DSS}(MIN)(V) \end{array}$	$R_{DS(ON)}(MAX)$ (Ω)
STR-Y6763	800	3.5
STR-Y6765		2.2
STR-Y6766		1.7

■ Typical Application Circuit

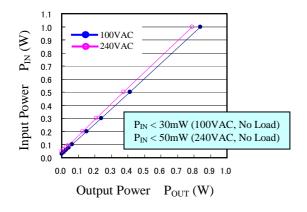


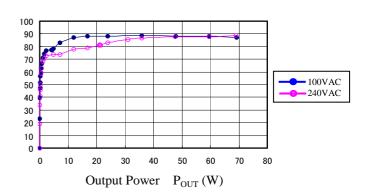
■ Typical Operation Waveforms and Electrical Characteristics

Operation Mode Transitions



Reference: Efficiency Characteristics (Wide Input, 70W Power Supply)





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