

STR-Y6700 Series

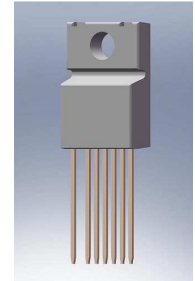
Power IC for Quasi-Resonant Mode Switching Power Supplies with Low Standby Power, High Efficiency and Low Noise in Full Load Range

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 : $P_{IN} < 30mW$ (100VAC), $P_{IN} < 50mW$ (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.,

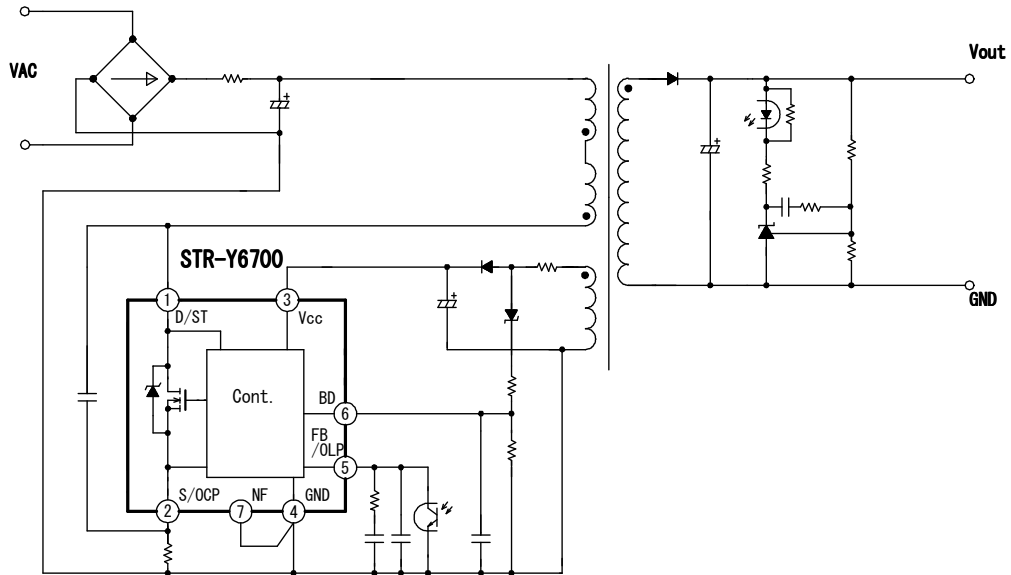
Home Appliance (White Goods), OA Equipments, Industry Machines, Communication Equipments, Others

Product Lineup

Product No.	MOSFET V_{DSS} (MIN) (V)	$R_{DS(ON)}$ (MAX) (Ω)
STR-Y6735	500	0.8
STR-Y6753	650	1.9
STR-Y6754		1.4

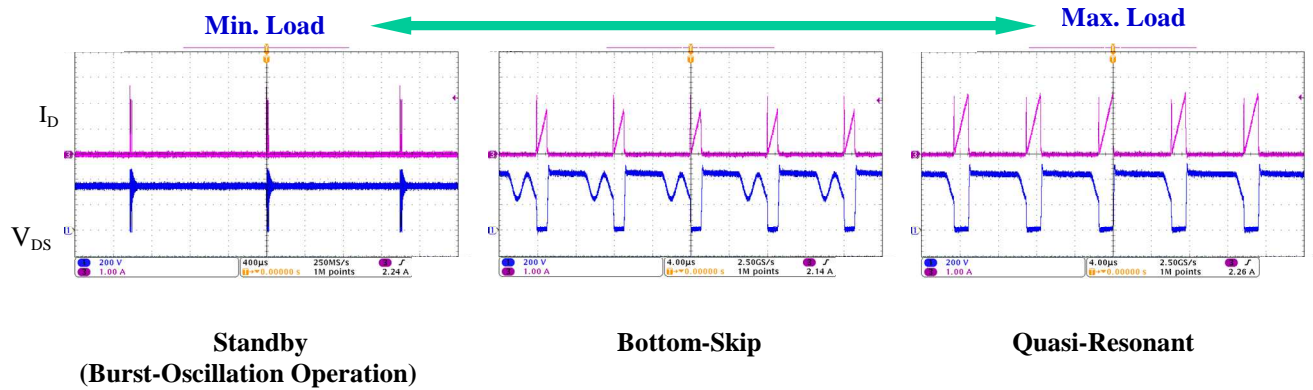
Product No.	MOSFET V_{DSS} (MIN) (V)	$R_{DS(ON)}$ (MAX) (Ω)
STR-Y6763	800	3.5
STR-Y6765		2.2
STR-Y6766		1.7

Typical Application Circuit

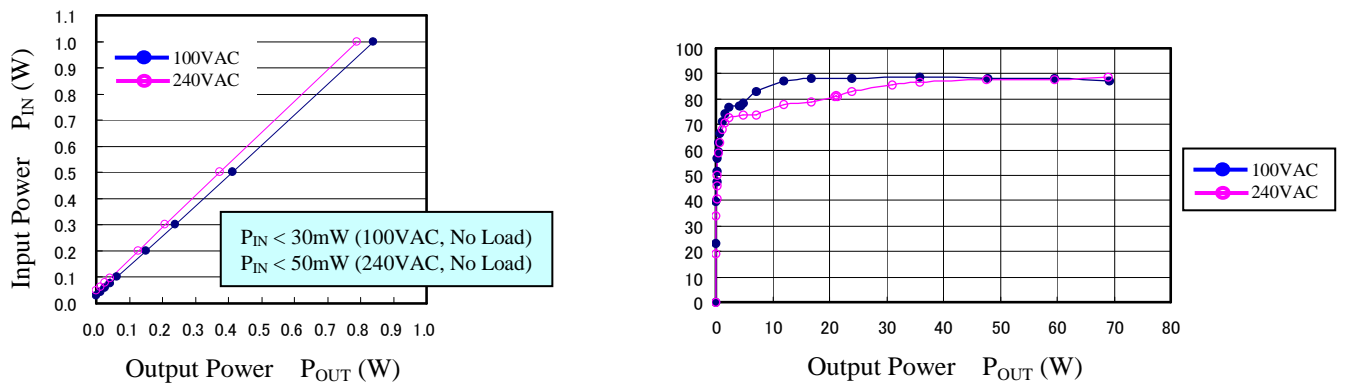


Typical Operation Waveforms and Electrical Characteristics

Operation Mode Transitions



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



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