STR-A6100 Series

PRC, Auto Burst Standby, Current-Mode Control

Low Power Off-line SMPS Primary Switcher

Features

PRC[Pulse Ratio Control]: (8µs fixed off-time, variable on-time)

The switching frequency varies within an optimum range of 63kHz to 120kHz, according to load variations, to create a quasi-jittering, low-EMI noise operation.

Auto burst standby: (No Load Consumption < 100 mW at AC 264V)

Enables very low power consumption at no load.

Typical results of a 5W universal input power supply are 35mW at AC110V and 43mW at AC220V.

Auto bias function

This function stabilizes operation during Auto Burst Standby mode, by preventing a Hiccup mode. The Auto Bias function forces the IC to turn on before the V_{CC} voltage reaches $V_{CC(OFF)}$, thereby stabilizing the entire power supply operation.

Integrated startup circuit

 $600\,\mathrm{V}$ BCD process allows direct connection of the STARTUP pin to the rectified high voltage rail. This reduces component count and improves overall efficiency.

Current mode control

Leading edge blanking

Not required the external Low-pass filter circuit which prevent the malfunction due to the leading edge spike current.

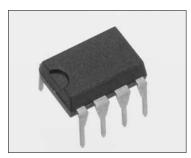
Avalanche energy guaranteed MOSFET with high V_{DSS}

The built-in power MOSFET simplifies the surge absorption circuit since the MOSFET guarantees the avalanche energy.

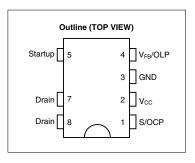
No V_{DSS} de-rating is required.

Various protecting functions

- Over current protection ----- pulse by pulse
- Over voltage protection ----- with latch
- Overload protection ----- Auto restart
- Thermal shutdown ----- with latch



Package (DIP-8)



Applications

Battery Charger	Cell Phone, Digital Still Camera, Camcorder, Shaver, Emergency light, Guidance light, and etc.
Standby Power Supply	Various TV applications, PC, LBP, Audio system and etc.
S.M.P.S	Ink jet printer, DVD Player/Recorder, VCR, Set Top Box and etc.
Controller Power Supply	Air conditioner, Refrigerator, Washer, Dish Washer and etc.

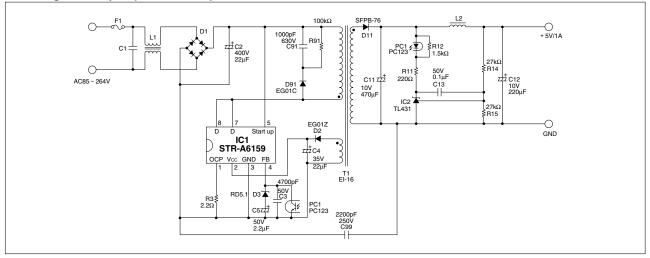
Product Lineup

Part Number	VDSS	RDS(ON)	VIN(AC)	Pout
STR-A6131	500V	3.95Ω	100V/120V	12W
STR-A6132	300 V	2.62Ω	100V/120V	16W
STR-A6153E		1.90Ω	230V/85V ~ 264V	24W/20W
STR-A6151	650V	3.95Ω	230V/85V ~ 264V	16W/12W
STR-A6159		6.00Ω	230V/85V ~ 264V	13W/10W
STR-A6169	800V	19.20Ω	230V/85V ~ 264V	8W/5W

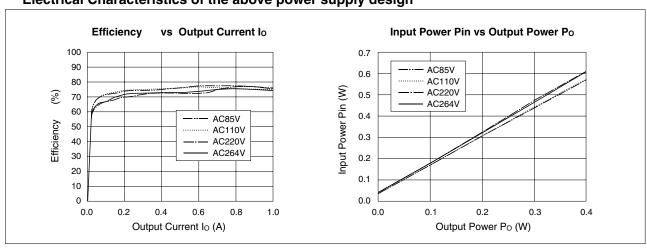
STR-A6100 Series

Design example (STR-A6159)

(5W Universal input-single output power supply)



Electrical Characteristics of the above power supply design



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