

STR-A6100 Series

PRC, Auto Burst Standby, Current-Mode Control
Low Power Off-line SMPS Primary Switcher

Features

PRC (Pulse Ratio Control): (8 μ s 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 AC264V)

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

600V 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.

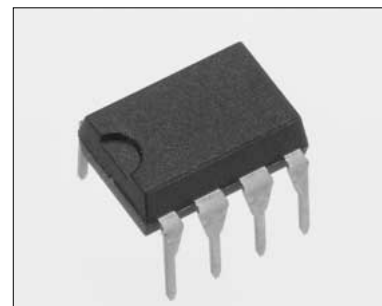
Avalanche energy guaranteed MOSFET with high V_{DS}

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

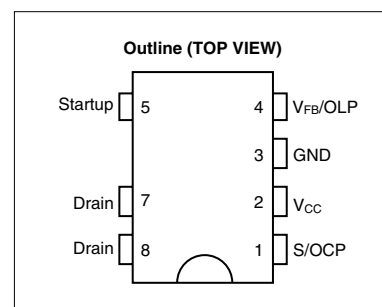
No V_{DS} de-rating is required.

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.

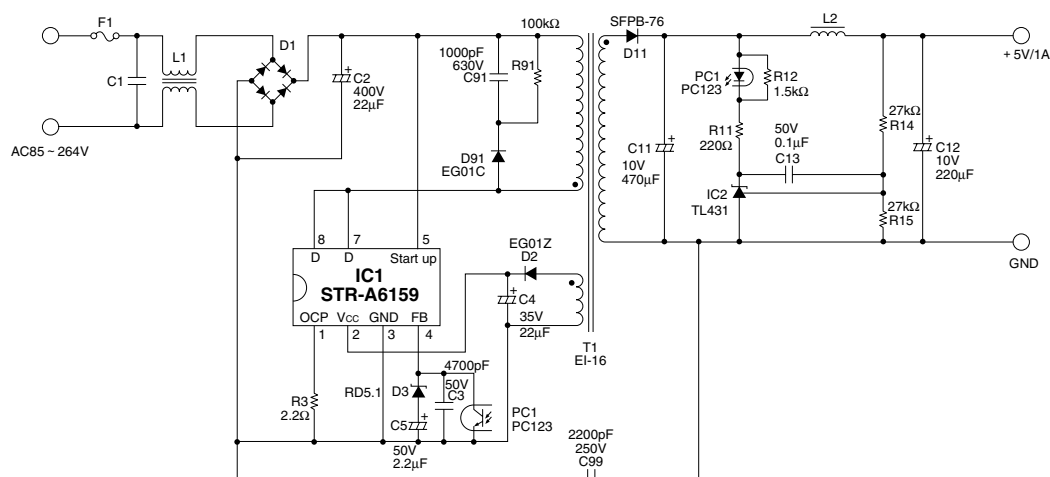
Product Lineup

Part Number	V_{DS}	$R_{DS(ON)}$	$V_{IN(AC)}$	Pout
STR-A6131	500V	3.95 Ω	100V/120V	12W
STR-A6132		2.62 Ω	100V/120V	16W
STR-A6153E	650V	1.90 Ω	230V/85V ~ 264V	24W/20W
STR-A6151		3.95 Ω	230V/85V ~ 264V	16W/12W
STR-A6159		6.00 Ω	230V/85V ~ 264V	13W/10W
STR-A6169	800V	19.20 Ω	230V/85V ~ 264V	8W/5W

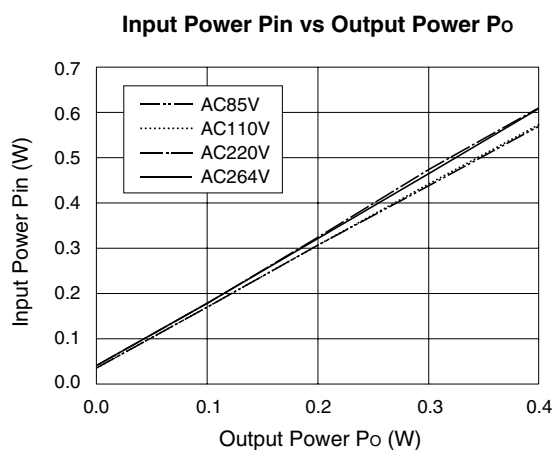
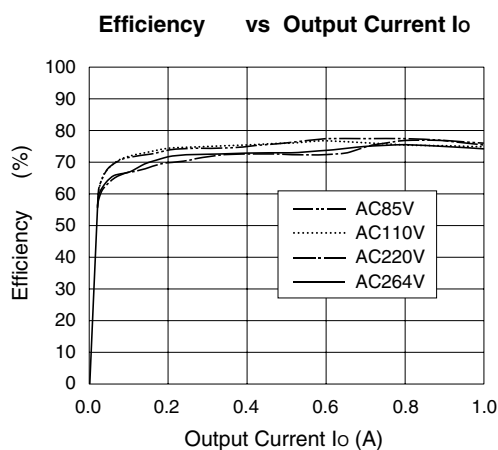
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Design example (STR-A6159)

(5W Universal input-single output power supply)



Electrical Characteristics of the above power supply design



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