

# STR-A6100 Series

PRC, Auto Burst Standby, Current-Mode Control

## Low Power Off-line SMPS Primary Switcher

### Features

**PRC** (Pulse Ratio Control ): (8 $\mu$ 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 < 100mW 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.

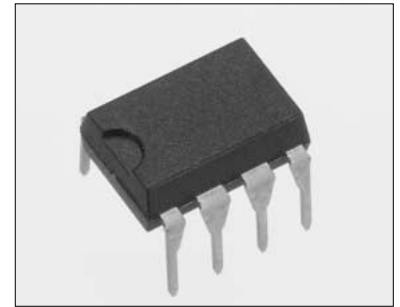
**Avalanche energy guaranteed MOSFET with high  $V_{DSS}$**

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

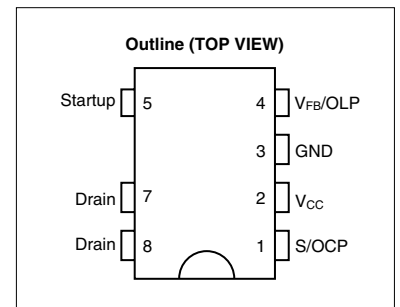
No  $V_{DSS}$  de-rating is required.

**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.

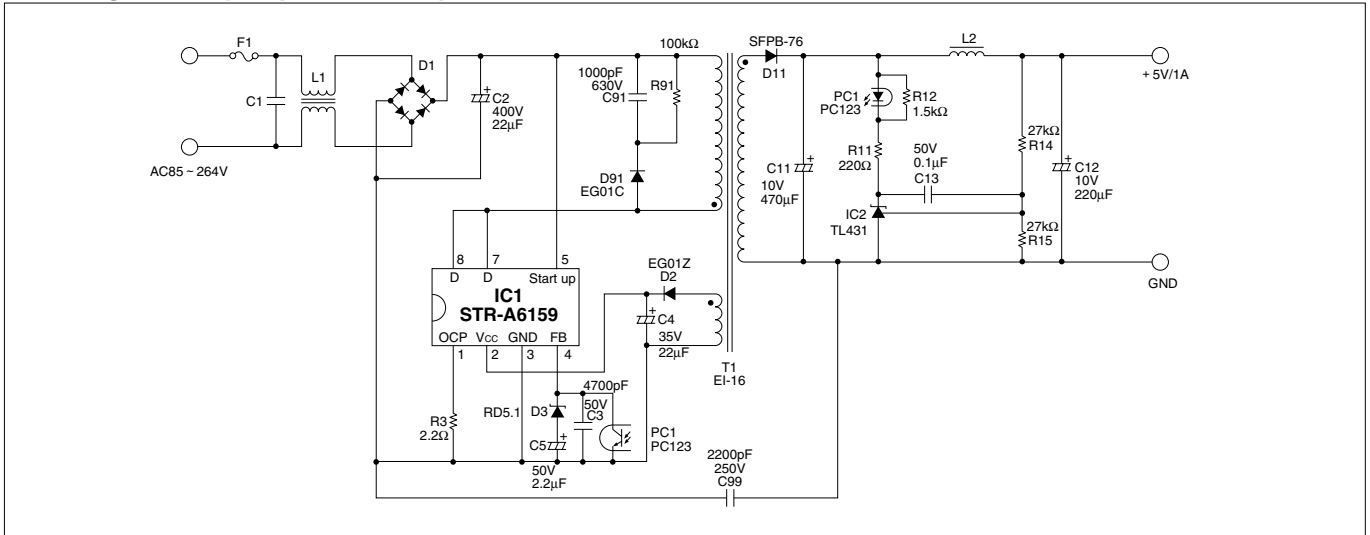
### Product Lineup

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

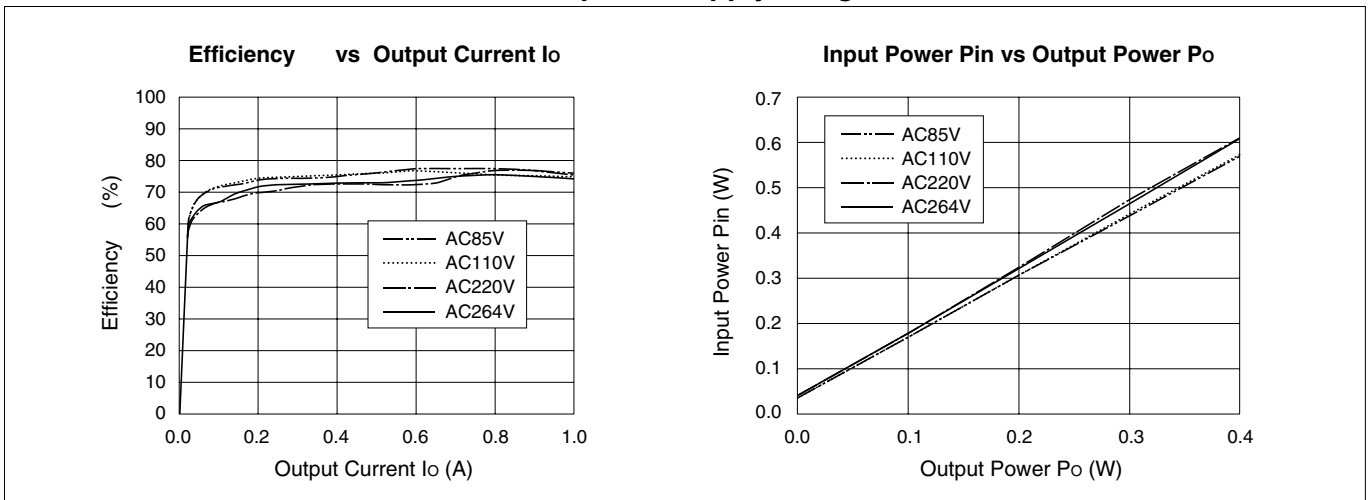
# STR-A6100 Series

## Design example (STR-A6159)

(5W Universal input-single output power supply)



## Electrical Characteristics of the above power supply design



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