

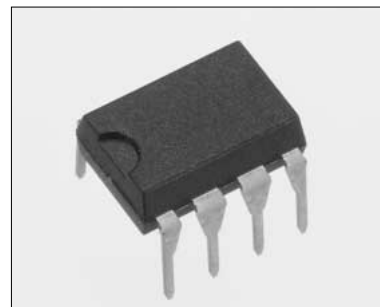
# STR-A6100 Series

PRC, Auto Burst Standby, Current-Mode Control

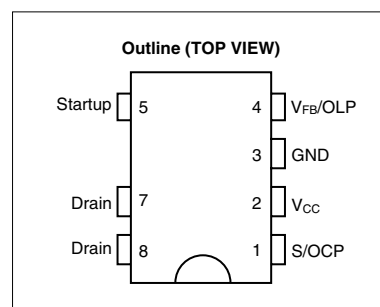
Low Power Off-line SMPS Primary Switcher

## 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<sub>CC</sub> voltage reaches V<sub>CC(OFF)</sub>, 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<sub>DSS</sub>**  
The built-in power MOSFET simplifies the surge absorption circuit since the MOSFET guarantees the avalanche energy.  
No V<sub>DSS</sub> 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.

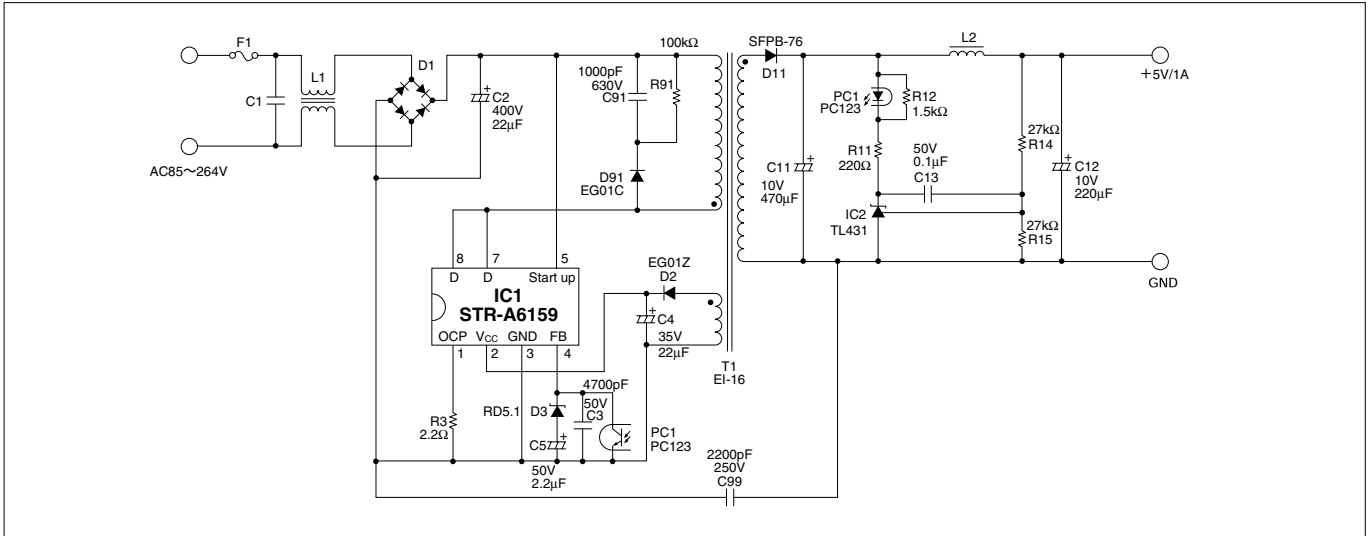
## Product Lineup

Part Number	V <sub>DSS</sub>	R <sub>DS(ON)</sub>	V <sub>IN(AC)</sub>	P <sub>out</sub>
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		19.20 $\Omega$	230V/85V ~264V	8W/5W

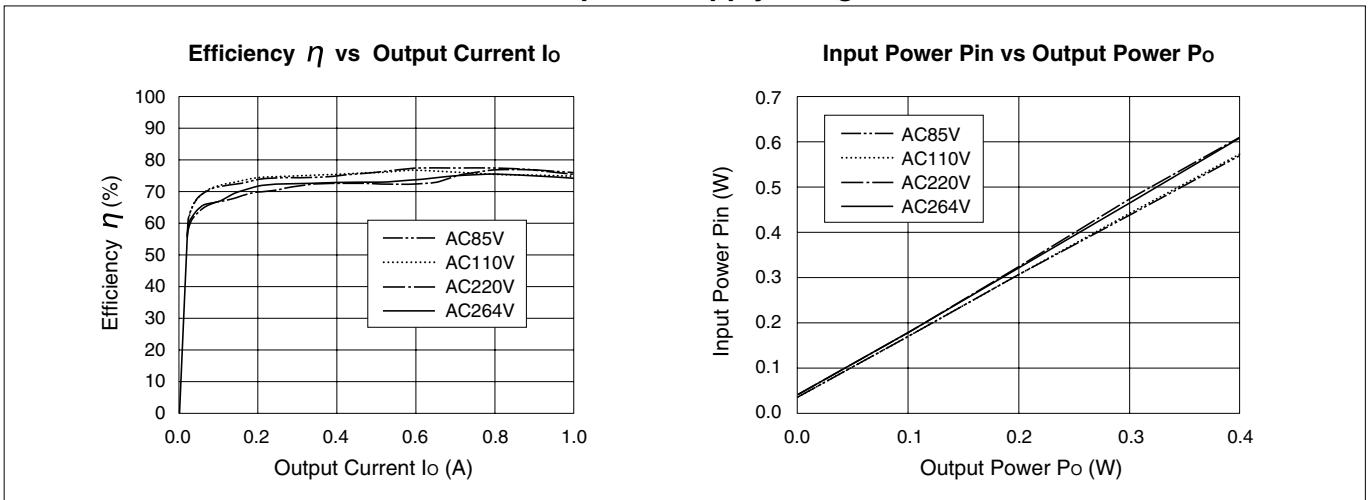
# STR-A6100 Series

## Design example (STR-A6159)

(5W Universal input-single output power supply)



## Electrical Characteristics of the above power supply design



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## SanKen SANKEN ELECTRIC CO.,LTD.

<b>Tokyo Office</b>	1-11-1 Nishi-Ikebukuro, Toshima-ku, Tokyo, JAPAN	PHONE: +81-3-3986-6164	FAX: +81-3-3986-8637
<b>Overseas Sales Offices</b>			
<b>Asia</b>	<b>Sanken Electric Singapore Pte. Ltd.</b> 150 Beach Road, #14-03 The Gateway West, Singapore 0718	PHONE: +65-291-4755	FAX: +65-297-1744
	<b>Sanken Electric Hong Kong Co., Ltd.</b> 1018 Ocean Centre, Canton Road, Kowloon, Hong Kong	PHONE: +852-2735-5262	FAX: +852-2735-5494
	<b>Sanken Electric Korea Co., Ltd.</b> SK Life Bldg. 6F, 168 Kongduk-dong, Mapo-ku, Seoul, 121-705, Korea	PHONE: +82-2-714-3700	FAX: +82-2-3272-2145
<b>North America</b>	<b>Allegro MicroSystems, Inc.</b> 115 Northeast Cutoff, Box 15036 Worcester, Massachusetts 01615, U.S.A.	PHONE: (508)-853-5000	FAX: (508)-853-7861
<b>Europe</b>	<b>Allegro MicroSystems, Europe Limited.</b> Balfour House, Churchfield Road, Walton-on-Thames, Surrey KT12 2TD, U.K.	PHONE: 01932-253355	FAX: 01932-246622