

Power Electronics

FA5571 series

Low Standby Power Quasi-Resonant Controller

■ Features

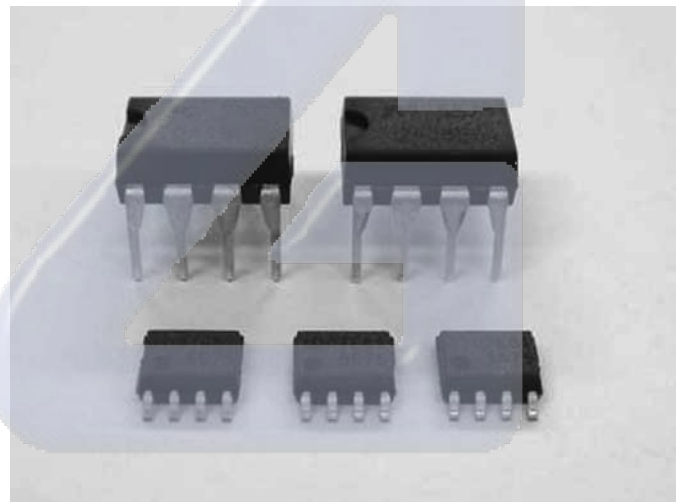
- Internal 500V high voltage startup current source
- Realized less than 1W input at 0.7W load by intermitting
- Quasi-resonant operation, low noise and high efficiency
- Numerous kind of protect functions

■ Applications

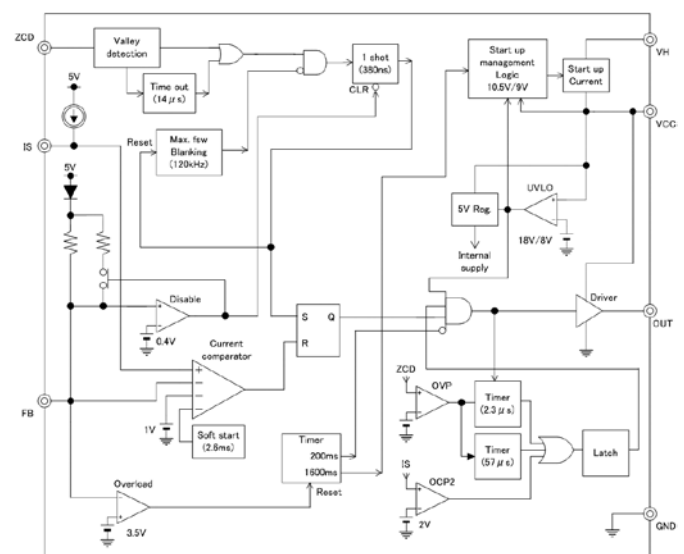
- LCD TV/Monitor Main and Standby SMPS
- Note PC Adapter

■ Specifications

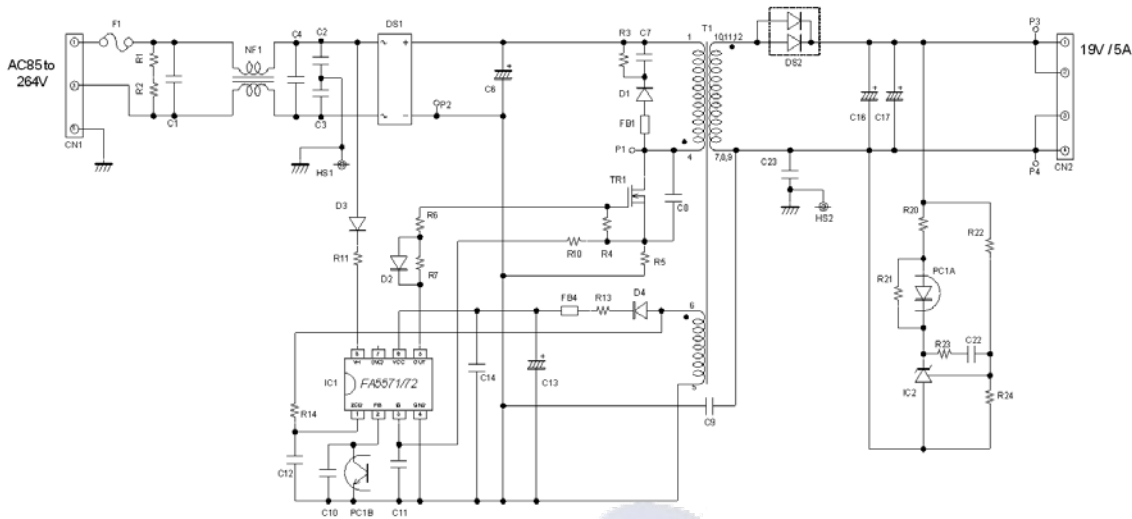
- Startup current source 7mA, 1.6mA at $V_{CC}=0V$, 30uA at off
- V_{CC} voltage range 9 to 26V
- OUT pin peak current sink 500mA, source -250mA
- Soft-start time 2.6ms
- IS current limiter $1V \pm 0.1V$, Windings shorted protection 2V
- ZCD OVP protection 7.2V (Latched)
- OLP timer auto-recovery switching on/off is 0.2/1.4 sec (Prepared in FA5571 series OLP auto-recovery and latched)



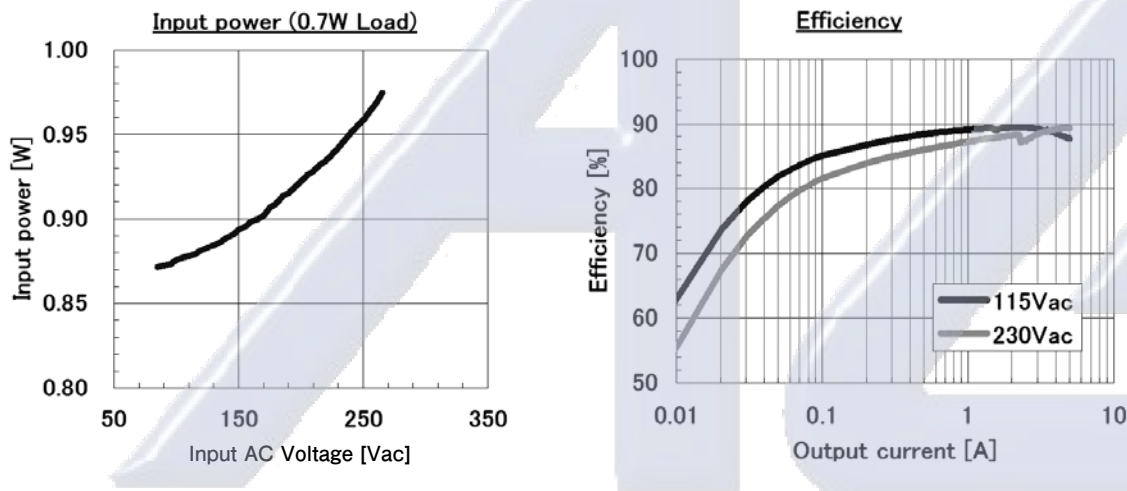
■ Circuit block



■ Example of power supply configuration



■ Standby power and efficiency (power supply specifications: output power - 19V, rating - 5 A)



■ Comparison between FA5571 series models and conventional models

Item	Conventional models				FA5571 series (new models)			
	FA5531	FA5532	FA5541	FA5542	FA55771	FA5572	FA5573	FA5574
1 Light-load operation	Frequency reduction		Intermittent operation		Intermittent operation		Frequency reduction	
2 Intermittent operation start FB voltage	—		0.34V		0.4V		—	
3 Frequency reduction start FB voltage	1.3V		—		—		1.15V	
4 Overload operation	Auto recovery	Timer latch	Auto recovery	Timer latch	Auto recovery	Timer latch	Auto recovery	Timer latch
5 Reduced current at VH pin when VCC is shorted	8mA when VCC is shorted (current-limiting resistor is required)		7.6mA when VCC is shorted (current-limiting resistor is required)		Limited VH current when VCC voltage is low IVH = 1.6mA at VCC = 0V			
6 OVP detection at ZCD pin	External latch function Latched in 48us after pull-up		External latch function Latched in 48us after pull-up		External latch function: Latched in 57us after pull-up + Latch is detected in 2.3us after turnoff			
7 Additional IS pin short protection function	N/A		N/A		2.0V			
8 VCC pin UVLO level	9.85V/9.1V		10.2V/9.0V		18V/8V			
9 Internal soft start	1ms (only at startup)		1ms (only at startup)		2.6ms (only at startup)			
10 OVP detection at VCC pin	28V		28V		N/A			