

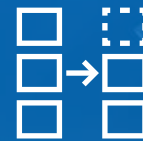
High power factor and low THD with worldwide input voltage



High power factor
and low THD



Low standby power

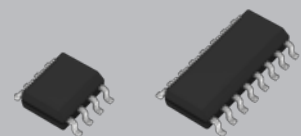


Reduce components

The FA1B10N critical conduction mode PFC control IC and FA6C64N LLC current resonant control IC are suitable for LED driver power supplies. They achieve high power factor and low THD (Total Harmonic Distortion)*1, and have a built-in auto burst function that ensures high efficiency even at light loads. They are applicable to a variety of CVCC control power supplies.

*1: THD is a value that expresses the degree of voltage and current distortion; where the lower the value, the lower the distortion.

- Improve power factor and THD : Achieve a power factor of 95% or higher and THD of 5% or lower at a 230 Vac input voltage and at 50% of the typical output power
- Achieve low standby power : Achieve input power of 300 mW or less at an input voltage of 230 Vac and no load
- Auto burst function : Can automatically switch to burst operation at light loads
- Reduce components in power supply : No need for auxiliary power and standby signal
- High reliability and high quality : ESD resistance ± 2 kV (HBM), $T_a = -60^\circ\text{C}$, the capacitive mode prevention



FA1B10N Package: SOP-8
FA6C64N Package: SOP-16

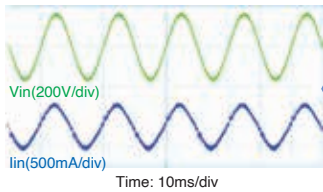
Application examples: LED driver power supplies, chargers, industrial power supplies

1. Improve power factor and THD

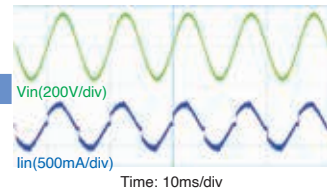
It enables high power factor and low THD even at high input voltages due to the PFC control IC's power factor and THD improvement function.

Power factor : 93.3% to **98.2%** 4.9% better than before
THD : 9.3% to **4.7%** 4.6% better than before

Power supply using FA1B10N



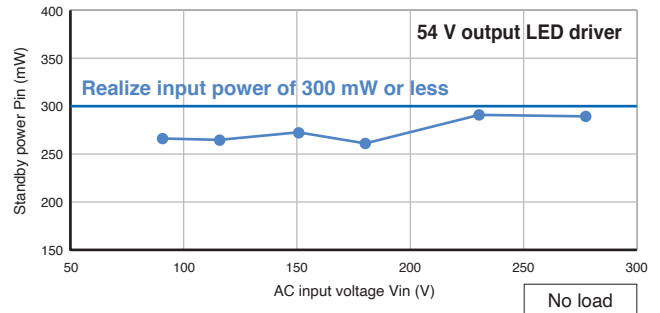
Conventional power supply



Vin=230Vac/50Hz, 50% Load (75W)

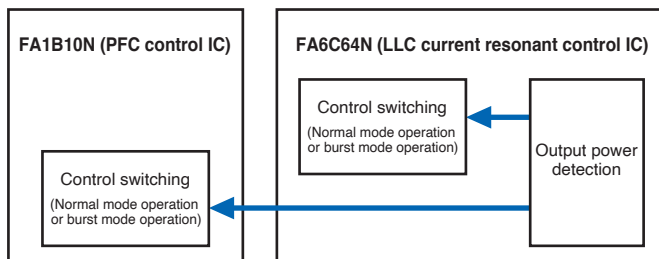
2. Low standby power

It is possible to achieve an input power of 300 mW or less at no load under worldwide input voltage without an auxiliary power supply.



3. Auto burst function

It detects output power using the FA6C64N, and can switch from normal mode operation to burst mode operation for both the FA1B10N and FA6C64N at light loads.



*The switchable output power is adjustable.

4. Reduce components in power supply

Reduce the number of components in power supply by built-in an X-CAP discharge function, auto burst mode control function, and FET drive power supply.

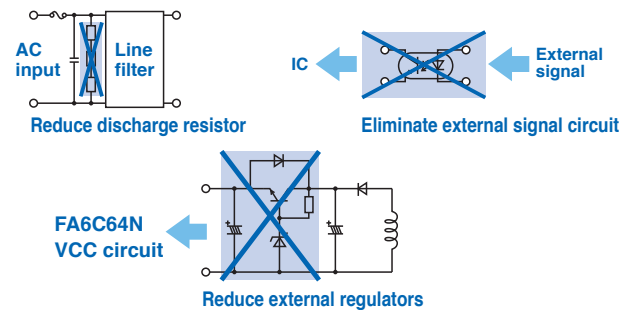


Table of FA1B10N PFC control IC functions

Item	FA1B10N
Power factor and THD improvement function	Built-in
Auto burst mode function	Built-in
X-CAP discharge function	Built-in
Startup circuit	Built-in, 650 V
Overcurrent protection	Built-in
PFC overvoltage protection	Built-in
ESD guaranteed operating voltage (HBM)	All pins ± 2 kV
Operating ambient temperature	-60°C to +150°C
Package	SOP8 (3.9 mm $\times$ 5.0 mm)

Table of FA6C64N LLC control IC functions

Item	FA6C64N
Auto burst mode function	Built-in
X-CAP discharge function	Built-in
Startup circuit	Built-in, 650 V
High side driver	Built-in, 780 V
Gate driver power supply	Built-in
VCC pin voltage	40 V withstand voltage
Automatically adjusted dead time	Built-in
Capacitive mode prevention function	Built-in
Brownout protection	Built-in
Overcurrent protection	Built-in
Overload protection	Built-in
ESD guaranteed operating voltage (HBM)	All pins ± 2 kV
Operating ambient temperature	-60°C to +150°C
Package	SOP16 (3.9 mm $\times$ 10.0 mm)

⚠ Safety Precautions

- * Before using this product, read the "Instruction Manual" and "Specifications" carefully, and consult with the retailer from which you purchased this product as necessary to use this product correctly.
- * The product must be handled by a technician with the appropriate skills.

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