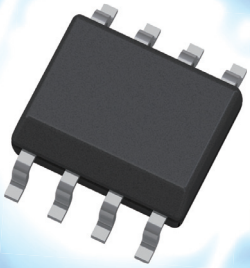
Fuji Electric
Innovating Energy Technology

Low Standby Power PWM Control IC

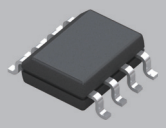
FA8A80/90

Series



The AC/DC PWM Control IC FA8A80/90 Series offers the best system for flyback circuits.
With a rich variety of functions integrated in the small-sized package of SOP8 it makes excellent cost performance via a compact power supply design that leads to good energy saving at light loads.

- Equipped with the power-off mode for achieving low standby power
- High efficiency is attained by a switching frequency reduction adjustment
- Reduced acoustic noise generation by a burst operation starting point adjustment
- Available in both 65 kHz and 100 kHz



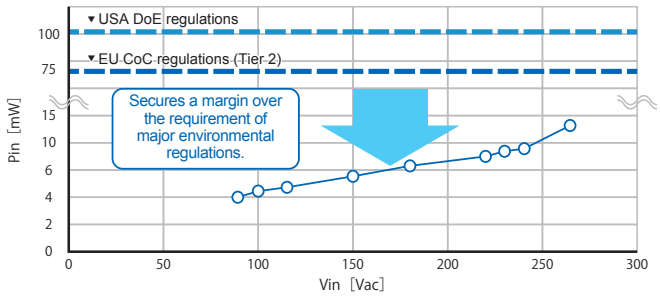
Package: SOP8

Applications (for flyback circuits)
Office automation equipment, AC adapters,
Auxiliary power supplies, LCD TVs, etc.

1. Achieves low standby power (equipped with power-off mode)

It achieves low standby power with its power-off mode. It is also capable of clearing the energy-saving standards for external power supplies such as DoE*1 and CoC*2 even securing some margin.

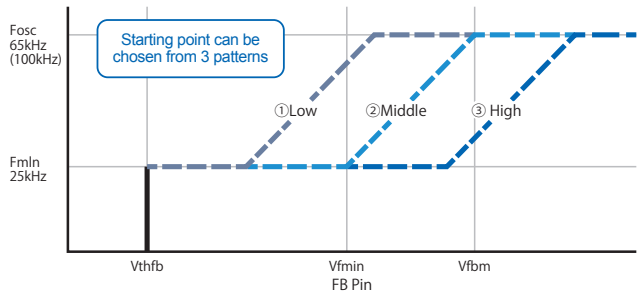
No-load standby power



2. Switching frequency reduction adjustment is available

The frequency reduction starting point can be chosen from three patterns, which makes it possible to improve efficiency for the power supply capacity.

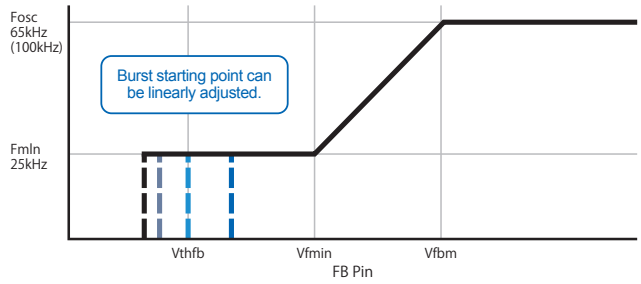
FB pin voltage and oscillation frequency



3. Burst starting point can be adjusted

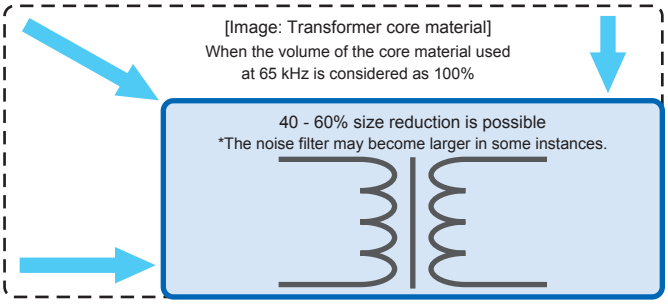
The burst starting point can be continuously adjusted, which makes it easy to improve efficiency at light loads and implement measures for acoustic noise reduction.

FB terminal voltage and oscillation frequency



4. Reduced size of the power supply (100 kHz type)

In addition to the 65 kHz type, a 100 kHz type is also available. The high frequency has made it possible to reduce the size of the power supply transformer.

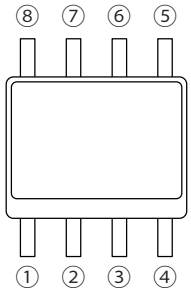


*1 DoE (Department of Energy): The energy-saving regulations in the United States that stand in for the Energy Star program promoted by the United States Department of Energy.
*2 CoC (Code of Conduct): Abbreviation for the EU Code of Conduct. Tier 2 became effective in January 2016 as a replacement of the EuP directive.

Product Line-up

Model	65kHz	FA8A80N	FA8A81N	FA8A90N	FA8A91N
	100kHz	FA8A84N	FA8A85N	FA8A94N	FA8A95N
Overload protection (OLP)		Auto recovery	Latch	Auto recovery	Latch
Delay time		200ms	200ms	200ms	200ms
Line correction		Built-in	Built-in	Built-in	Built-in
Detection level		1 level	1 level	1 level	1 level
X-Cap discharge function		None		Built-in	
Frequency reduction function		Selectable (3 patterns)			
Burst operation point adjustment		Linearly adjustable			
Power-off mode		Built-in			
DSS (Dynamic self supply)		Built-in			
Overvoltage protection		25.5V (latch)			
Overheating protection		140°C (latch)			
Start up circuit		650V			

Pin assignment



No.	Symbol	Function
①	LAT	• External latch signal input • Switching frequency reduction setting • Switching stop FB voltage setting
②	FB	• Feedback control signal input
③	CS	• Current sense input • Overload detection, overcurrent limit • Overload protection line compensation setting
④	GND	• Ground
⑤	OUT	• Output
⑥	VCC	• Power supply pin • Under voltage lock out • Overvoltage protection
⑦	(NC)	
⑧	VH	• High-voltage input • AC input filter capacity (X-Cap) discharge*1

*1: Excluding FA8A80/81/84/85

⚠ 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.

Fuji Electric Co., Ltd.

URL http: //www.fujielectric.com/products/semiconductor/
Gate City Ohsaki, East Tower, 1-11-2, Osaki, Shinagawa-ku, Tokyo 141-0032, Japan Tel:+81-3-5435-7156

• Fuji Electric Hong Kong Co., Ltd.	Suites 1911-13, 19/F., Tower 6, The Gateway, Harbour City, Tsim Sha Tsui, Kowloon, Hong Kong	Tel: +852-2664-8699
• Fuji Electric Taiwan Co., Ltd.	10F. No.168, Song Jiang Road, Taipei, Taiwan	Tel: +886-2-2515-1850
• Fuji Electric Asia Pacific Pte. Ltd.	151 Lorong Chuan, #2-01A, New Tech Park, SINGAPORE 556741	Tel: +65-6533-0014
• Fuji Electric Corp. of America	50 Northfield Avenue Edison, NJ 08837, USA	Tel: +1-732-560-9410
• Fuji Electric Europe GmbH	Goethering 58, 63067 Offenbach, am Main, F.R. GERMANY	Tel: +49-69-6690290

Fuji Electric
Innovating Energy Technology