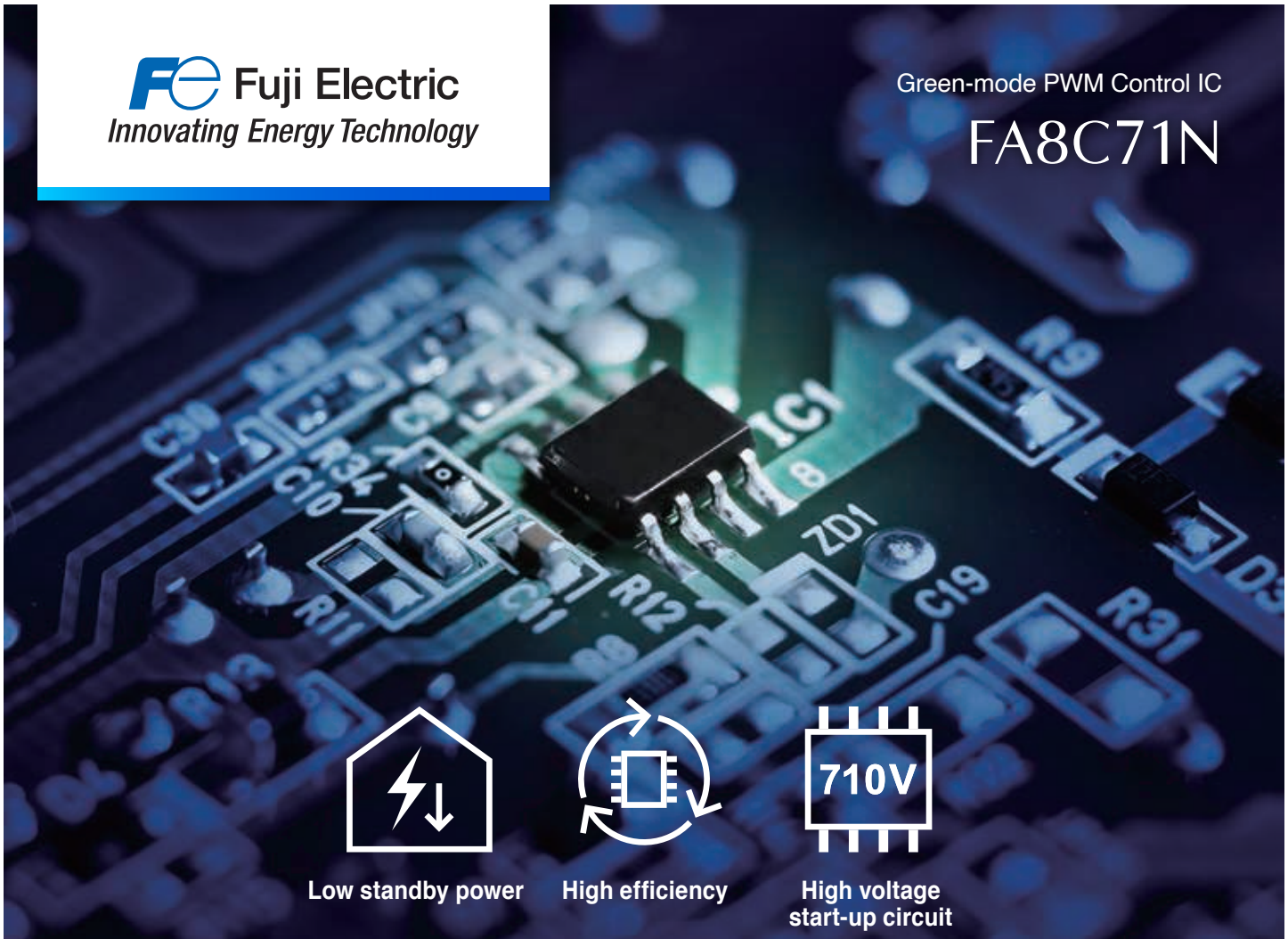
Fuji Electric
Innovating Energy Technology

Green-mode PWM Control IC

FA8C71N



Low standby power **High efficiency** **High voltage start-up circuit**

Contributes to higher efficiency in switching power supplies

The FA8C71N green-mode PWM control IC for AC/DC converters provides an optimal system for flyback converters. The ability to control burst operation helps improve the standby power and light load efficiency required of power supplies. The built-in FET drive circuit has a clamping function that eliminates the need for a gate protection circuit. The high withstand voltage of the start-up circuit enables a wide range of input voltages.

- Its optimized burst operation contributes to low standby power and improved efficiency under light loads
  - Achieves standby power of below 25 mW at 230 V AC
  - Achieves efficiency of over 85% at 230 V AC and Po of 500 mW
- Built-in 710 V start-up circuit expands the input voltage range of power supplies.
- Built-in the gate clamp circuit, limited to 16V.
- Easy to use in many applications with selectable line compensation for overload protection

Package: SOP 8

Application examples (for flyback converter)

OA equipment, AC adapters, industrial power supplies, LCD TVs, etc.

MTET0-3632a-EN

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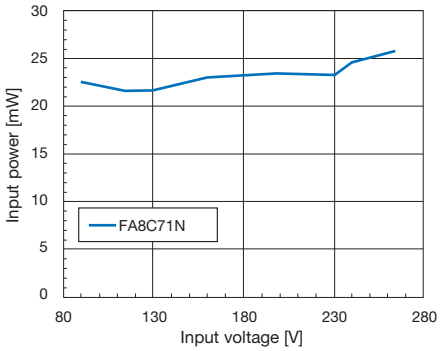
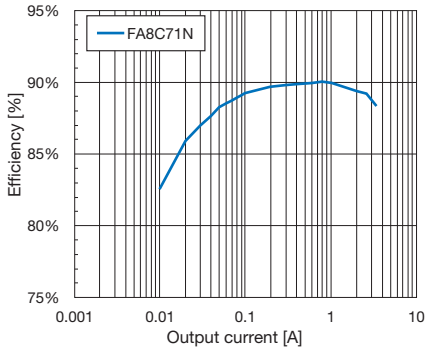
1. Its optimized burst operation contributes to lowering standby power and improving efficiency under light loads

Fuji Electric's proprietary burst operation control lowers standby power and improves efficiency under light loads.

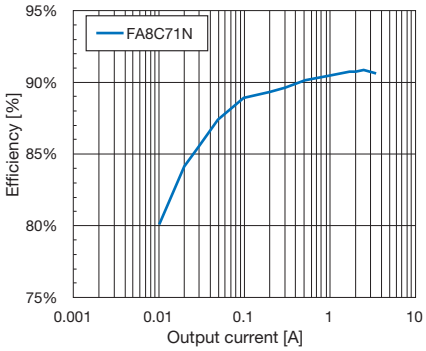
Input power (No Load)



Output current vs. Efficiency
Vin=115Vac



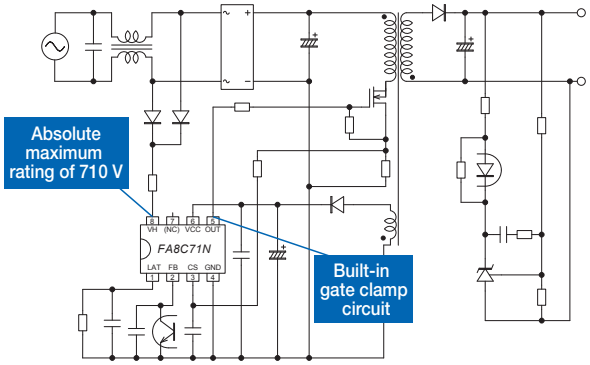
Output current vs. Efficiency
Vin=230Vac



Evaluation board rated output: 19 V/3.4 A

2. Built-in high voltage start-up circuit and gate clamp circuit

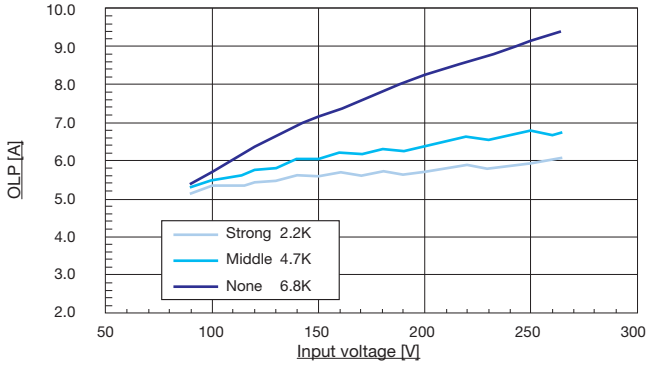
Its built-in 710 V start-up circuit supports a wide range of input voltages. The FET drive circuit incorporates a gate clamp circuit that is limited to 16V.



3. Overload detection input voltage dependence (line compensation)

Provides a new setting of "None" for overload detection line compensation. Overload protection is also available for power supplies with PFC.

OLP

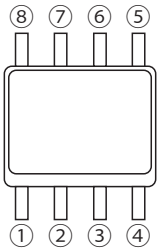


FA8C71N function table

Item		FA8C71N
Light load efficiency improvement function		Frequency reduction + burst mode
Burst operation point adjustment		Linearly adjustable*
X-CAP discharge function		Built-in
Overload protection (OLP)		Latch
	Delay time	200 ms
	Line compensation	Selectable (3 patterns. One of them is "No line compensation")
Overvoltage protection		36.0 V (latch)
Overheat protection		137°C (latch)
DSS(Dynamic self supply)		Built-in
Start-up circuit absolute maximum rating		710 V

*When the burst operation point adjustment function is selected

Pin description



No.	Name	Functions
①	LAT	• External latch signal input • Burst operation point adjustment
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 • Under Voltage Lock Out • Overvoltage protection
⑦	(NC)	
⑧	VH	• High voltage input • AC input filter capacitor (X-CAP) discharge

⚠ 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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URL 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.	Unit 1601-03 & 05, 16/F., Tower II, Grand Century Place, No. 193 Prince Edward Road West, Mongkok, Kowloon, Hong Kong	Tel: +852-2664-8699
• Fuji Electric Taiwan Co., Ltd.	5F. No.168, Song Jiang Road, Taipei, Taiwan	Tel: +886-2-2511-1820
• Fuji Electric Asia Pacific Pte. Ltd.	151 Lorong Chuan, #03-01/01A, New Tech Park, SINGAPORE 556741	Tel: +65-6533-0014
• Fuji Electric India Private Ltd.	119(Part), 120, 120A, Electrical and Electronics Industrial Estate, Perungudi, Chennai - 600096, Tamil Nadu, India	Tel: +91-44-40004200
• 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

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