

Featured Products



Maximize the performance of AC/DC converters

IEC 61000-3-2 compliant

PFC Controller ICs for AC/DC Converters

BD7690FJ/BD7692FJ

Achieves class-leading*¹ safety performance

Market-proven in a variety of applications, including electronic equipment such as TVs featuring a power consumption of 75W and up and lighting fixtures (>5W)

Delivers best-in-class*¹ power savings

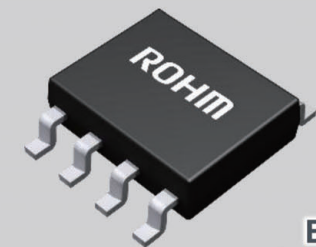
Low current consumption (66% lower than conventional products) significantly improves power savings

Contributes to lower system costs by reducing the number of parts

Easily reduce*² costs and component count by replacing existing PFC ICs

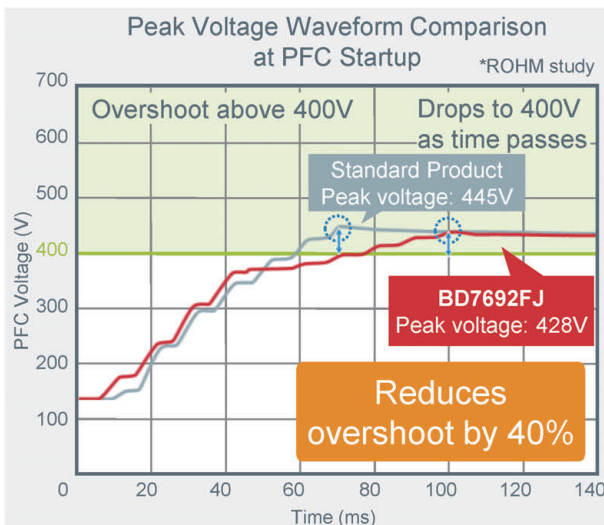
*¹: ROHM June 2019 study

*²: Assuming compatible pin-layout and performance characteristics



BD7692FJ
SOP-J8 Package
6.0 × 4.9 × 1.375 mm

■ Overshoot Reduction and Protection Functions



Measurement conditions: 90VAC input, 0A output (no-load startup)

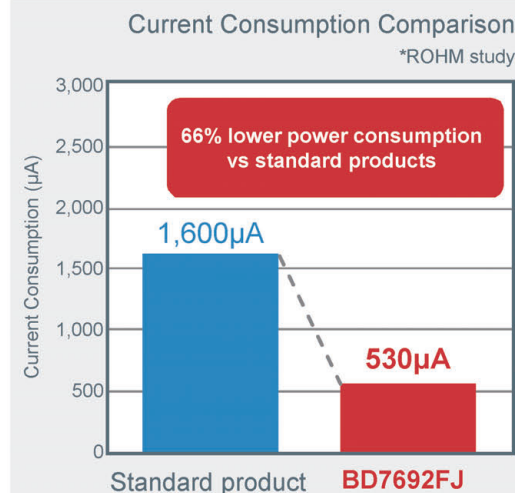
Output overshoot at startup reduced by 40%

Also equipped with a startup output overshoot reduction function that decreases output voltage overshoot by 40%, suppressing overvoltage to the output capacitor and extending the service life of the power supply.

Primary protection functions

- Current sense resistor short-circuit protection
- Output overvoltage protection
- Overcurrent protection

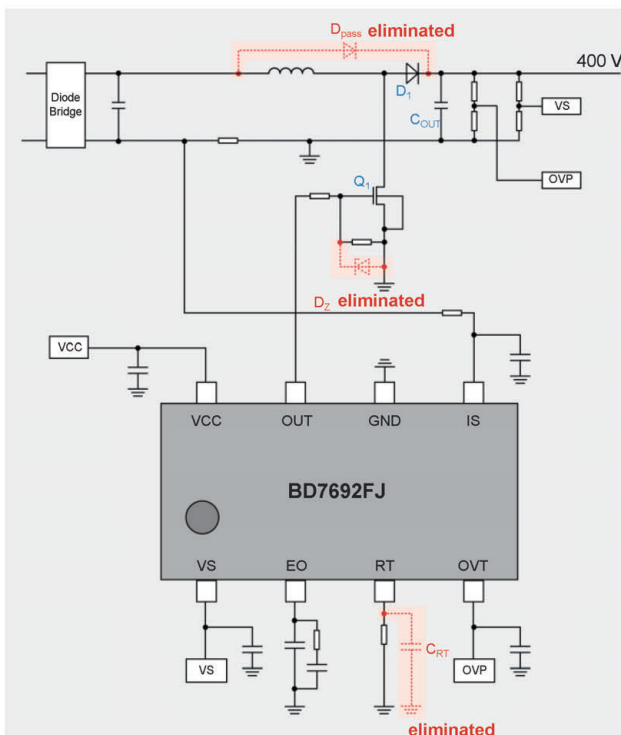
■ Provides industry-leading*¹ power savings



Leveraging analog design technology allows ROHM to achieve a current consumption of just 530µA after IC startup - 66% lower than standard products.

In addition, a 12V output clamp circuit is included for PFC control that reduces switching loss by limiting the drive voltage to the MOSFET, improving power efficiency at light loads by 4%.

■ Contributes to lower system costs by reducing the number of parts



D_z: Zener diode for protecting the Q1 Gate

Used to ensure the output voltage (OUT) does not exceed the gate withstand voltage of the connected FET when VCC abnormally rises. The BD7692FJ eliminates the need for this since the H output voltage (OUT) is clamped to 12V when VCC rises.

C_{RT}: RT voltage stabilizing capacitor

Not required for the BD7692FJ since it can operate without a capacitor.

D_{pass}: Bypass diode

Used for current flowing to COUT when power is supplied (before PFC operation). In the case of BD7692FJ, this is redirected through D₁. This poses no problem as the IS voltage prevents switching while current remains in the coil when the power is turned ON. Required for the BD7690FJ auxiliary winding type.

■ Applications

- Desktop PCs
- LED lighting
- Multifunction printers
- Projectors
- TV monitors
- Refrigerators
- Servers
- Industrial power supplies
- Entertainment devices

and more



Desktop PCs



LED lighting



Projectors



TV monitors



Refrigerators

■ PFC Controller IC Lineup

Part No.	Supply Voltage (V)	Current Consumption Type (μA)	PFC Maximum Frequency (kHz)	Zero Cross Detection Method	IS-GND Short-circuit Protection	Overshoot Reduction Function	Operating Temperature (°C)	Package
BD7690FJ	10.0 to 26.0	380	220	Auxiliary Winding	—	—	-40 to +105	SOP-J8
New BD7692FJ		530	400	Resistance	✓	✓		



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The content specified in this document is correct as of July 1st, 2019.