

ABSTRACT

A power supply device includes a resistor 11 that limits an electric current supplied from an AC power supply 2, a switching unit 12 that is connected in parallel with the resistor 11, a rectifier circuit unit 13 that is connected to a subsequent stage of the resistor 11 and the switching unit 12 and rectifies an AC voltage of the AC power supply 2, a booster circuit unit 14 that boosts the rectified DC voltage, a DC-voltage detection unit 15 that detects a DC voltage output from the booster circuit unit 14, an AC voltage detection unit 19 that detects an AC voltage of the AC power supply 2, a protection setting unit 16 that compares a first protection voltage calculated on the basis of the boosting level by the booster circuit unit 14 with a second protection voltage calculated on the basis of the AC voltage detected by the AC-voltage detection unit 19 and sets either one as a protection voltage, and a control unit 17 that opens the switching unit 12 when the DC voltage falls below the protection voltage set by the protection setting unit 16 and stops boosting performed by the booster circuit unit 14. Accordingly, the power supply device can suppress an inrush current generated at the time of recovery from a power failure.