

Title (en)

Method of controlling a half-bridge circuit, and a half-bridge circuit controlled thereby

Title (de)

Verfahren zur Steuerung einer Halbbrückenschaltung und damit gesteuerte Halbbrückenschaltung

Title (fr)

Procédé de contrôle d'un circuit à demi-pont, et circuit à demi-pont commandé avec celui-ci

Publication

EP 2315505 A1 20110427 (EN)

Application

EP 09173168 A 20091015

Priority

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Abstract (en)

A method of controlling a half-bridge circuit, in particular for use with lamps such as compact fluorescent lamps, is disclosed. The method is particularly useful for preventing excess power dissipation in the half-bridge transistors under mains over-voltage supply conditions. Whereas conventional methods rely on adjusting the switching frequency in response to the - measured - input voltage, the method disclosed herein relies on measurement of the mean square voltage of the half-bridge node. By controlling the switching frequency to maintain a constant mean square half-bridge voltage, the power dissipated by the half-bridge transistors is held constant independent of variations in mains input voltage. In one embodiment, the control is effected by charging a capacitor with a current corresponding to the instantaneous square of the half-bridge node voltage, and then discharging it with a current corresponding to the instantaneous square of the reference voltage. The voltage across residual charge is used to control a voltage-controlled oscillator, to modify the half-bridge switching frequency and maintain the mean square value.

IPC 8 full level

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CPC (source: EP)

H05B 41/2983 (2013.01)

Citation (search report)

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Designated extension state (EPC)

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