

a charge circuit (17) charging a capacitor (16) through a current which is proportional to a voltage generated in the choke coil (5); and

a discharge circuit (18) setting a voltage of the capacitor (16) to 0V when the current flowing to the switching device (6) is 0, the circuit detecting the voltage of the capacitor (16) as a value which is proportional to the current flowing to the switching device (6).

3. A current detecting circuit of a half-bridge type HID lighting circuit, in which a series circuit of a pair of switching devices (42, 43) is connected between output-terminals of a DC power supply (41) and a series circuit of a pair of capacitors (44, 45) is also connected between them, and a choke coil (47) and a HID lamp are connected between a midpoint of the pair of switching devices (42, 43) and a

midpoint of the pair of capacity (44, 45), so that the HID lamp (48) is lit up by making the pair of switching devices (42, 43) perform on-off operations in an alternating sequence, comprising:

- a charge circuit (47) charging a capacitor (56) through a current which is proportional to a voltage developed in the choke coil (47); and
- a discharge circuit (58) setting a voltage of the capacitor (56) to 0V when both of the pair of switching devices (42, 43) are turned off, the circuit detecting the voltage of the capacitor (56) as a value which is proportional to the current flowing to the switching devices (42, 43).

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