

ABSTRACT

In an aspect of the disclosure, an operation method, for balancing voltage of capacitors of a bridge circuit of a multi-level LLC resonant converter, includes: measuring voltages of the capacitors of the bridge circuit, an output voltage and an output current of an output load the multi-level LLC resonant converter, and an input voltage of the bridge circuit; selecting a voltage-level zone of a required output voltage of the bridge circuit according to the output voltage of the output load, and the input voltage of the bridge circuit; selecting a circuit mode, with a highest value of the required output voltage; and outputting PWM signals corresponding to the circuit mode, with a switching frequency, to switches of the plurality of capacitor-switch modules.

FIG. 1