

ABSTRACT

This invention is to reduce a voltage across a smoothing capacitor in a single-phase capacitorless inverter. A smoothing circuit (15) has a smoothing capacitor (C) connected between a pair of power supply lines (L1, L2). A diode (Ds) has its anode connected to one of the power supply lines (L1) and has its cathode connected to an end of a resistor (Rs), the other end of the resistor is connected to an end of a capacitor (Cs), the other end of the capacitor is connected to the other of the power supply lines (L2). In this way, the magnitude of a rectified voltage (Vdc) across the smoothing capacitor (C) can be reduced as compared with an absence of the series connection of diode (Ds), resistor (Rs) and capacitor (Cs).