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(54) SEMICONDUCTOR DEVICE, SEMICONDUCTOR EQUIPMENT, AND SEMICONDUCTOR PROCESS METHOD

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(57)**ABSTRACT**

A semiconductor device, a semiconductor equipment, and a semiconductor process method. The semiconductor process method includes a phase of wafer adsorption and a phase of wafer release and charge release. The phase of wafer adsorption includes: a power supply unit outputting an operating voltage to an electrostatic chuck, so as to control the electrostatic chuck to adsorb a wafer. The phase of wafer release and charge release includes: adjusting a voltage outputted by the power supply unit from the operating voltage to a charge release voltage, and maintaining for a first preset time to release some of the charges accumulated on the electrostatic chuck so as to avoid abnormal discharge; and switching the electrostatic chuck to be connected to a protective resistor, and maintaining for a second preset time to release the remaining charges accumulated on the electrostatic chuck.

