

ABSTRACT

Provided is a technical configuration comprising a reaction chamber for processing a substrate, a microwave oscillator for supplying a microwave to a process chamber, and a controller configured to be capable of controlling the microwave oscillator to perform: a heating process in which the microwave, while being maintained at a first microwave output, is supplied to the substrate to heat the same by performing, a predetermined number of times or for a first predetermined time, a supply time for supplying a first microwave and a stop time shorter than the supply time for stopping the first microwave; and a modifying process in which the microwave, while being maintained at a second microwave output higher than the first microwave output, is supplied to the substrate for a second predetermined time to modify the same.

FIG. 1