## ABSTRACT

A microwave is introduced into a process chamber through a waveguide (26) of the plasma process apparatus, thereby generating plasma. A reflection monitor (40) and an electric power monitor (42) monitor the electric power of a reflected wave reflected by the plasma that is generated in the process chamber. Moreover, an incidence monitor (36) and a frequency monitor (48) monitor the frequency of the microwave generated by a magnetron (24). An electric power supplied to the magnetron (24) is controlled based on the monitored electric power of the reflected wave and the monitored frequency. This method thus controls plasma density to a constant level.



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