

ETCHING METHOD

ABSTRACT

A method of etching a first region including a multilayered film, in which first dielectric films and second dielectric films serving as silicon nitride films are alternately stacked, and a second region including a single-layered silicon oxide film is provided. The etching method includes a first plasma process of generating plasma of a first processing gas containing a fluorocarbon gas and an oxygen gas within a processing vessel of a plasma processing apparatus; and a second plasma process of generating plasma of a second processing gas containing a hydrogen gas, nitrogen trifluoride gas and a carbon-containing gas within the processing vessel. A temperature of an electrostatic chuck is set to a first temperature in the first plasma process, and the temperature of the electrostatic chuck is set to a second temperature lower than the first temperature in the second plasma process.

Figure 1