electrode provided in the chuck device, a chuck power supply electrically connected to the single-pole type electrode; and a plasma generation gas introduction device for introducing a plasma generation gas into the vacuum chamber, and a plasma generation portion which generates plasma of the plasma generation. An object to be processed is arranged on the chuck device, wherein the chuck power supply applies a chuck voltage to the single-pole type electrode while the plasma is being generated inside the vacuum chamber and the object to be processed is processed by the plasma while the object to be processed is being chucked by the chuck device. The plasma generation portion is arranged away from the-single pole type electrode; an insulating substrate is used as the object to be processed; and the chuck voltage which periodically changes between a positive voltage and a negative voltage is applied from the chuck power supply to the single-pole type electrode.

The present invention is the vacuum processing device of which a groove is formed in a surface of the chuck device, and a thermally conductive gas supply device for supplying a thermally conductive gas to the groove is connected to the groove.

The present invention is the vacuum processing device of which the chuck power supply is set so as to output the chuck voltage in which a time of application of the positive voltage