

POWER SUPPLY SYSTEM, PLASMA PROCESSING DEVICE, AND CONTROL METHOD

ABSTRACT

5 A disclosed power supply system of a plasma processing
apparatus includes a radio frequency power supply, a bias power supply,
and a power supply controller. The radio frequency power supply
generates radio frequency power for plasma generation. The bias power
supply supplies an electric bias to a substrate support. The power supply
10 controller determines respective frequencies of the radio frequency
power for a plurality of designated phase periods among a plurality of
phase periods within a waveform cycle of the electric bias to suppress
reflection of the radio frequency power. The power supply controller
determines respective frequencies of the radio frequency power for
15 phase periods, other than the plurality of designated phase periods,
among the plurality of phase periods by interpolation using the
respective frequencies of the radio frequency power for the plurality of
designated phase periods.

20 Fig. 2