

ABSTRACT

A high-frequency power circuit includes a first antenna circuit (L_{in} , VC_{in1} , VC_{in2}), a second antenna circuit (L_o , VC_{o1} , VC_{o2}), and a controller (51). The first antenna circuit includes a first antenna (L_{in}) for plasma production, a first distribution capacitor (VC_{in1}), and a first variable capacitor (VC_{in2}). The second antenna includes a second antenna (L_o) for plasma production, a second distribution capacitor (VC_{o1}), and a second variable capacitor (VC_{o2}). The controller sets the capacitance of the first variable capacitor based on a detection result of a phase difference between current and voltage in a series-connected portion of the first antenna and the first variable capacitor during plasma production to reduce the phase difference. The controller sets the capacitance of the second variable capacitor based on a detection result of a phase difference between current and voltage in a series-connected portion of the second antenna and the second variable capacitor during plasma production to reduce the phase difference.

FIG. 1