

CHAMBER MATCHING USING VOLTAGE CONTROL MODE

ABSTRACT

Systems and methods for compensating for harmonics produced during plasma processing in a plasma chamber are described. One of the methods includes retrieving a measurement of a combined waveform. The combined waveform includes a fundamental waveform and a harmonic waveform. The combined waveform defines a voltage proximate to a surface of a chuck, which is coupled to a radio frequency (RF) transmission line. The RF transmission line is coupled to an impedance matching circuit. The impedance matching circuit is coupled to an RF generator. The method further includes extracting the fundamental waveform from the combined waveform, determining a difference between a magnitude of the combined waveform and a magnitude of the fundamental waveform, and controlling the RF generator to compensate for the difference.

Fig. 2