

ABSTRACT

INTEGRATED POWER OSCILLATOR RF SOURCE FOR PLASMA IMMERSION ION IMPLANTATION SYSTEM

A wafer processing system is provided. The system includes a wafer handling system for introducing semiconductor wafers into a processing chamber (20). An oscillator (80) is operatively coupled to an antenna (30a) for igniting a plasma (94) within the processing chamber (20). The plasma (94) and antenna (30a) form a resonant circuit (90a) with the oscillator (80), and the oscillator (80) varies an output characteristic associated therewith based on a load change in the resonant circuit during plasma ignition.

Figure 2