ABSTRACT

FEEDBACK CONTROL AND COHERENCY OF MULTIPLE POWER SUPPLIES IN RADIO FREQUENCY POWER DELIVERY SYSTEMS FOR PULSED MODE SCHEMES IN THIN FILM PROCESSING

A RF power supply system for delivering periodic RF power to a load. A power amplifier outputs a RF signal to the load. A sensor measures the RF signal provided to the load and outputs signals that vary in accordance with the RF signal. A first feedback loop enables control the RF signal based upon power determined in accordance with output from the sensor. A second feedback loop enables control the RF signal based upon energy measured in accordance with signals output from the sensor. Energy amplitude and duration provide control values for varying the RF signal. The control system and techniques are applicable to both pulsed RF power supplies and in various instances to continuous wave power supplies.

FIG. 1