HEATING PLATE WITH PLANAR HEATER ZONES FOR SEMICONDUCTOR PROCESSING

Abstract

Abstract A heating plate for a substrate support assembly in a semiconductor plasma processing apparatus, comprises multiple independently controllable planar heater zones arranged in a scalable multiplexing layout, and electronics to independently control and power the planar heater zones. Each planar heater zone includes one or more heater elements made of an insulator-conductor composite. A substrate support assembly in which the heating plate is incorporated includes an electrostatic clamping electrode and a temperature controlled base plate. Methods for manufacturing the heating plate include bonding together ceramic sheets having planar heater zones, power supply lines, power return lines and vias.

Fig. 1