REPLACEMENT SHEET 29 MAY 2002

PIEZO-ACTUATED CMP CARRIER

ABSTRACT

A chemical-mechanical polishing (CMP) control system (50) controls distribution of pressure across the backside of a semiconductor wafer being polished. The system includes a CMP apparatus (10) having a carrier (14) for supporting a semiconductor wafer. The carrier includes a plurality of dual function piezoelectric actuators. The actuators (41-43) sense pressure variations across the semiconductor wafer and are individually controllable. A control is connected to the actuators for monitoring sensed pressure variations and controlling the actuators to provide a controlled pressure distribution across the semiconductor wafer.

FIG 4

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