

ABSTRACT**A CARRIER HEAD WITH A SUBSTRATE DETECTION MECHANISM
FOR A CHEMICAL MECHANICAL POLISHING SYSTEM**

A carrier head for a chemical mechanical polishing system includes a substrate sensing mechanism. The carrier head includes a base and a flexible member connected to the base to define a chamber. A lower surface of the flexible member provides a substrate receiving surface. The substrate sensing mechanism includes a sensor to measure a pressure in the chamber and generate an output signal representative thereof, and a processor configured to indicate whether the substrate is attached to the substrate receiving surface in response to the output signal.

(Fig. 5B).