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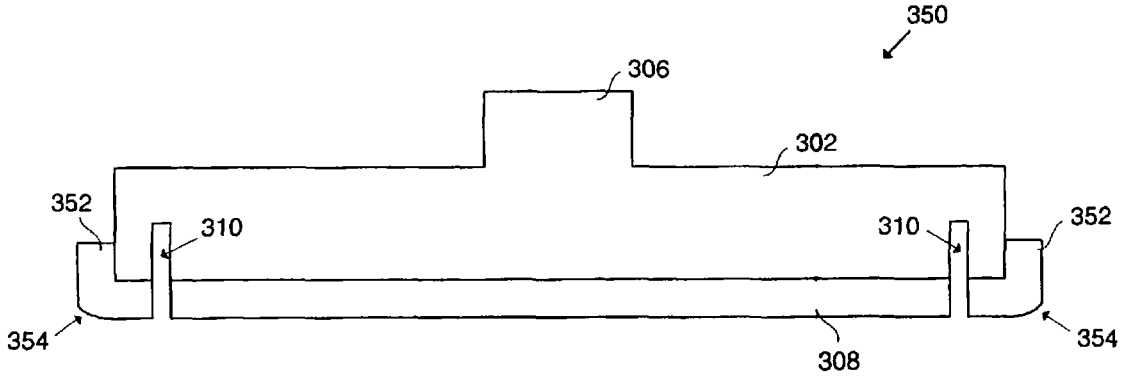
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54) Title: WAFER CARRIER WITH GROOVE FOR DECOUPLING RETAINER RING FROM WAFER




(57) Abstract: The present invention provides a wafer carrier (300) for use with a chemical mechanical planarization apparatus. The wafer carrier includes a vacuum chuck (302) and a retainer ring (309) The vacuum chuck is configured to hold and rotate a wafer (308) for planarizing a surface topography of the wafer on a polishing pad (502) The vacuum chuck includes an inner region for holding the wafer and an outer region (316) and further has a groove adapted to decouple the inner region (318) and the outer region The inner and outer regions of the vacuum chuck are arranged to move independently in a direction orthogonal to a polishing surface of the polishing pad (502) The retainer ring (304) is disposed on the outer region of the vacuum chuck and is configured to retain the wafer during CMP processing In this configuration, the decoupled retainer ring and the wafer are arranged to move independently to align to the polishing surface of the polishing pad during CMP processing

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