

ABSTRACT

A LOCAL PLASMA CONFINEMENT AND PRESSURE CONTROL ARRANGEMENT AND METHODS THEREOF

An arrangement for performing pressure control within a processing chamber substrate processing is provided. The arrangement includes a peripheral ring configured at least for surrounding a confined chamber volume that is configured for sustaining a plasma for etching the substrate during substrate processing. The peripheral ring includes a plurality of slots that is configured at least for exhausting processed byproduct gas from the confined chamber volume during substrate processing. The arrangement also includes a conductive control ring that is positioned next to the peripheral ring and is configured to include plurality of slots. The pressure control is achieved by moving the conductive control ring relative to the peripheral ring such that a first slot on the peripheral ring and a second slot on the conductive control ring are offset with respect to one another in a range of zero offset to full offset.

Fig. 1