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(54) Title: ARC CURRENT REDUCTION FROM AN ELECTROSTATIC CHUCK

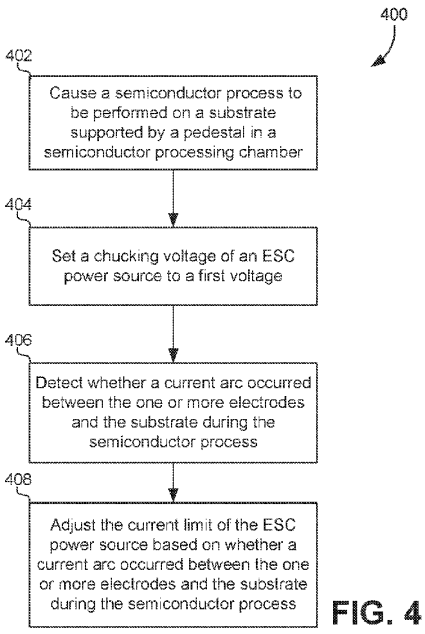


FIG. 4

(57) Abstract: A semiconductor processing chamber may include an electrostatic chuck (ESC) with one or more electrodes that may deliver a chucking voltage to the pedestal. The pedestal can support a substrate while a semiconductor process occurs in the semiconductor processing chamber. The one or more electrodes may be coupled to an ESC power source that may provide the chucking voltage and may have an adjustable current limit. The adjustable current limit may be set based on certain characteristics of a semiconductor process that may be occurring in the semiconductor processing chamber. The ESC power source can prevent the supplied current from exceeding the adjustable current limit, thereby preventing current arcs from discharging into the substrate.

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