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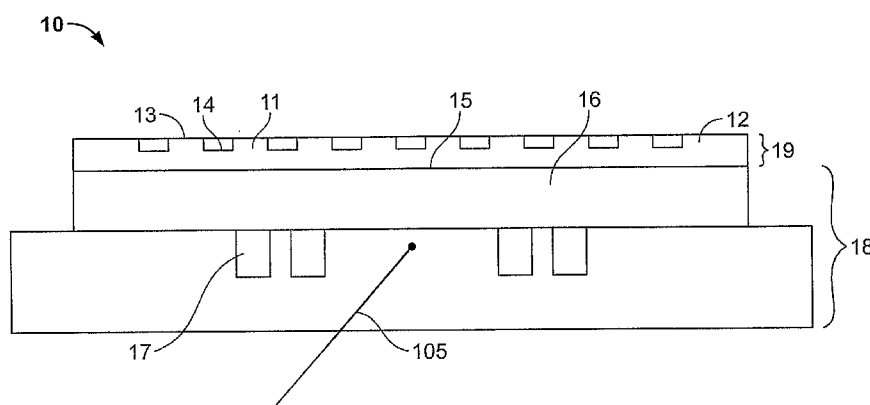
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
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(54) Title: METHOD OF DETERMINING A TARGET MESA CONFIGURATION OF AN ELECTROSTATIC CHUCK



(57) Abstract: A method of modifying the heat transfer coefficient profile of an electrostatic chuck by configuring the areal density of a mesa configuration of an insulating layer of the chuck is provided. A method of modifying the capacitance profile of an electrostatic chuck by adjustment or initial fabrication of the height of a mesa configuration of an insulating layer of the chuck is further provided. The heat transfer coefficient at a given site can be measured by use of a heat flux probe, whereas the capacitance at a given site can be measured by use of a capacitance probe. The probes are placed on the insulating surface of the chuck and may include a plurality of mesas in a single measurement. A plurality of measurements made across the chuck provide a heat transfer coefficient profile or a capacitance profile, from which a target mesa areal density and a target mesa height are determined. The target density and height are achieved mechanically; the target density by mechanically adjusting the areal density of existing mesas; and the target height by creating or deepening low areas surrounding planned or existing mesas, respectively. This can be accomplished using any of known techniques for controlled material removal such as laser machining or grit blast machining on an X-Y table.

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