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(71) Applicant (for all designated States except US): **LAM RESEARCH CORPORATION** [US/US]; 4650 Cushing Parkway, P1418pct, Fremont, California 94538 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **BAILEY III, Andrew, D.** [US/US]; 5167 Northway Road, Pleasanton, California 94566 (US).

(74) Agents: **NGUYEN, Joseph, A.** et al.; IPSG, P.C., P.O. Box 700640, San Jose, California 95170 (US).

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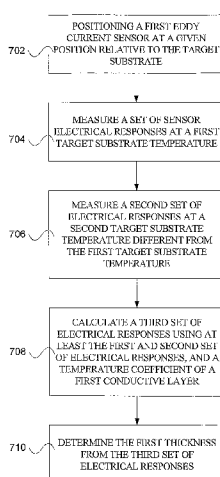
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(54) Title: METHODS AND APPARATUS FOR OPTIMIZING AN ELECTRICAL RESPONSE TO A SET OF CONDUCTIVE LAYERS ON A SUBSTRATE



(57) Abstract: A method of determining a thickness of a first conductive layer formed of a first conductive material on a target substrate, the target substrate further having a second conductive layer formed of a second conductive material is disclosed. The method comprises positioning a first eddy current sensor at a given position relative to the target substrate, and measuring a first set of electrical responses that includes at least one of a first voltage measurement and a first current measurement, at a first target substrate temperature, and a second set of measurements at a second temperature and calculating a third set of electrical responses, using the first and second sets of electrical responses and the first temperature coefficient of the first conductive layer, the third set of electrical responses representing responses substantially attributable to the first conductive layer; and determining the first thickness from the third set of electrical responses.

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