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(71) Applicant (for all designated States except US): **APPLIED MATERIALS, INC.** [US/US]; 3050 Bowers Avenue, Santa Clara, California 95054 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GOLDIN, Alexander** [US/US]; 1020 Hyde Avenue, San Jose, California 95129 (US). **SEREBRYANOV, Oleg V.** [US/US]; 1374 Redmond Avenue, San Jose, California 95120 (US).

(74) Agent: **SERVILLA, Scott S.**; Diehl Servilla LLC, 33 Wood Avenue South, Second Floor, Suite 210, Iselin, New Jersey 08830 (US).

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(54) Title: HIGH EFFICIENCY HIGH ACCURACY HEATER DRIVER

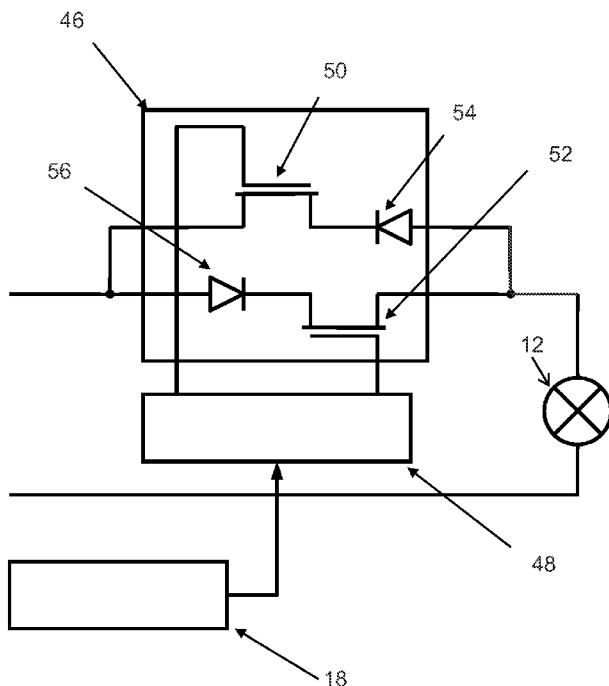


FIG. 4

(57) Abstract: A rapid thermal process chamber having a lamp driver circuit that includes two transistors and two diodes is described. The rapid thermal process chamber includes a plurality of halogen lamps, the lamp driver, a temperature sensor that measures wafer temperature, a temperature controller connected to the temperature sensor and to the lamp driver, the temperature controller providing control signals to the lamp driver that are functions of the wafer temperature and a desired temperature. The lamp driver includes two transistors that are controlled by the control signals so that the power factor of the power supplied to the plurality of halogen lamps is in the range of 0.9 to 1.



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