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(54) **Title:** THERMAL CONTROL WAFER WITH INTEGRATED HEATING-SENSING ELEMENTS

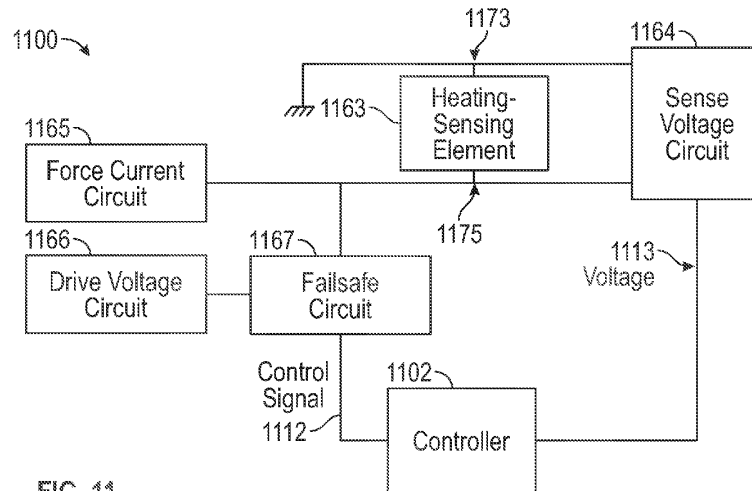


FIG. 11

(57) **Abstract:** Disclosed herein are systems and methods comprising a thermal control wafer (TCW) comprising a plurality of heater zones. A heater zone may comprise a heater-sensing element that generates heat during a heating mode and provides a resistance during a sensing mode. During testing, a wafer under test (WUT) may be placed on top of a chuck assembly. The TCW may be part of or separate from the chuck assembly. Controlling one or more heater zones on the TCW may control the temperatures of DUT(s) while being tested. The thermal controller may comprise a plurality of thermal control channel multiplexed to a plurality of heater zones. E.g., one or more first heater zones can be activated at a first time, one or more second heater zones can be activated at a second time, one or more third heater zones can be activated at a third time, etc.

[Continued on next page]

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