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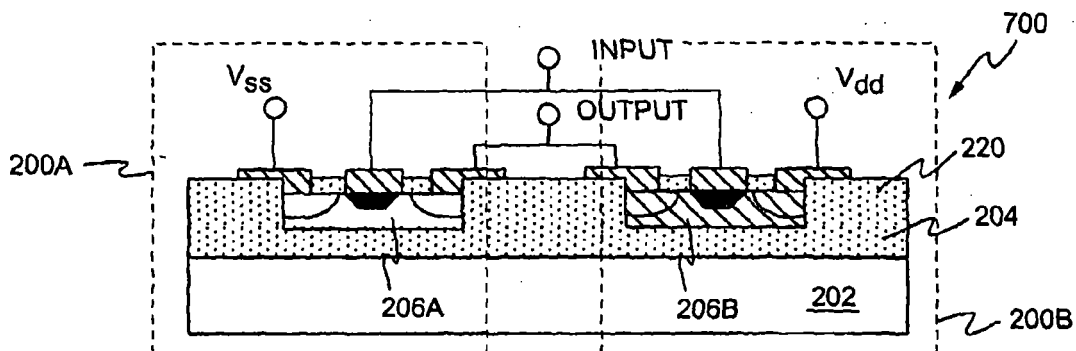
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(54) Title: **COMPLEMENTARY SCHOTTKY JUNCTION TRANSISTORS AND METHODS OF FORMING THE SAME**

(57) Abstract: Various methods for forming semiconductor devices are provided that include the step of implanting dopants into the devices to achieve doping concentrations that allow complementary n- and p-channel Schottky junction transistor (SJT) behavior with devices of substantially equal gate length and gate width. Moreover, complementary SJT devices are provided that include n- and p-channel devices that have approximately equal gate lengths and widths. SJT devices may be appropriately doped and configured such that input current and the output current both vary substantially exponentially with a gate-source voltage in the sub-threshold mode, and such that the drain current varies substantially linearly with the gate current through a substantially constant current gain that is given by a ratio of the drain current to the gate current.



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