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(54) **HIGH VOLTAGE SWITCH**

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(57) **ABSTRACT**

A high-voltage, HV, bidirectional-power-switch, BPS, circuit comprising: a HV-block coupled to a first-terminal and comprising two HV transistors arranged in series in a BPS configuration; and a resistance-network comprising a plurality of switchable-resistance-modules connected in parallel with each other between the HV-block and a second-terminal, wherein each switchable-resistance-module comprises: a precision-resistor connected in series with a conduction-channel of a resistance-switching-transistor; a first-biasing-resistor connected between a first-conduction-channel-terminal and a control-terminal of the resistance-switching-transistor; a second-biasing-resistor connected between a second-conduction-channel-terminal and the control-terminal of the resistance-switching-transistor; a body-bias-control-circuit configured to control a bias of body diodes of the resistance-switching-transistor; a switchable-sourcing-current-source comprising a first-current-source and a first-source-switch connected in series between a positive-voltage-supply-terminal and the control-terminal; and a switchable-sinking-current-source comprising a second-current-source and a second-source-switch connected in series between a negative-voltage-supply-terminal and the control-terminal, wherein the first-source-switch and the second-source-switch are configured to receive switching-signals to selectively enable or disable the resistance-switching-transistor.