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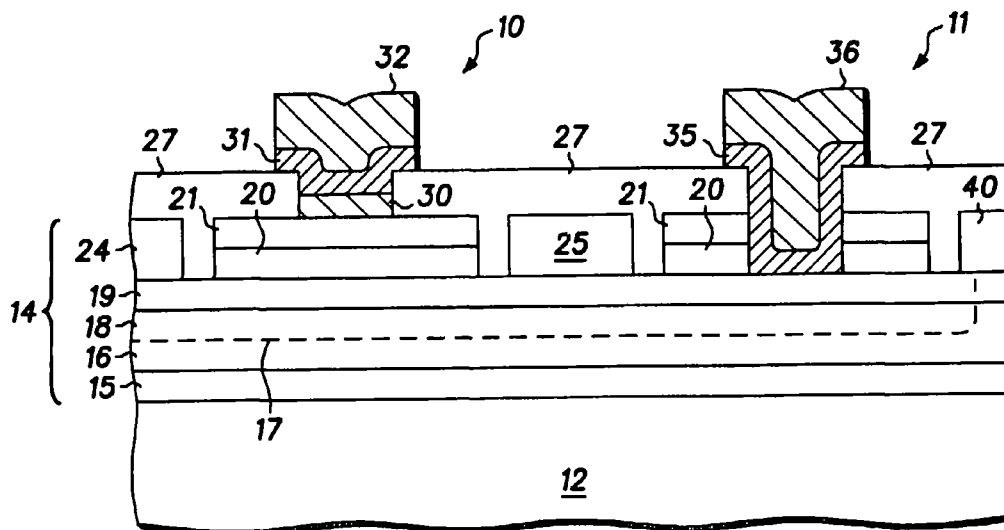
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(54) Title: SINGLE SUPPLY HFET WITH TEMPERATURE COMPENSATION



(57) Abstract: A method of fabricating apparatus, and the apparatus, for providing low voltage temperature compensation in a single power supply HFET including a stack (14) of epitaxially grown compound semiconductor layers with an HFET (10) formed in the stack. A Schottky diode (11) is formed in the stack adjacent the HFET (10) during the formation of the HFET. The HFET (10) and the Schottky diode (11) are formed simultaneously, with a portion of one of the layers of metal forming the gate of the HFET being positioned in contact with a layer (19) of the stack (14) having a low bandgap (e.g. less than 0.8 eV) to provide a turn-on voltage for the Schottky diode of less than 1.8 Volts. The Schottky diode (11) is connected to the gate contact of the HFET by a gate circuit (48) to compensate for changes in current loading in the gate circuit with changes in temperature.

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