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(54) HIGH ELECTRON MOBILITY TRANSISTOR ESD PROTECTION STRUCTURES

(57) A multi-gate High Electron Mobility Transistor (HEMT) can include a Two-Dimension Electron Gas (2DEG) channel between the drain and the source. A first gate can be disposed proximate the 2DEG channel between the drain and source. The first gate can be configured to deplete majority carriers in the 2DEG channel proximate the first gate when a potential applied between the first gate and the source is less than a threshold voltage associated with the first gate. A second gate can be disposed proximate the 2DEC channel, between the drain and the first gate. The second gate can be electrically coupled to the drain. The second gate can be configured to deplete majority carriers in the 2DEG channel proximate the second gate when a potential applied between the second gate and the 2DEG channel between the second gate and the first gate is less than a threshold voltage associated with the second gate. The threshold voltage associated with the second gate can be equal to or greater than the threshold voltage associated with the first gate.

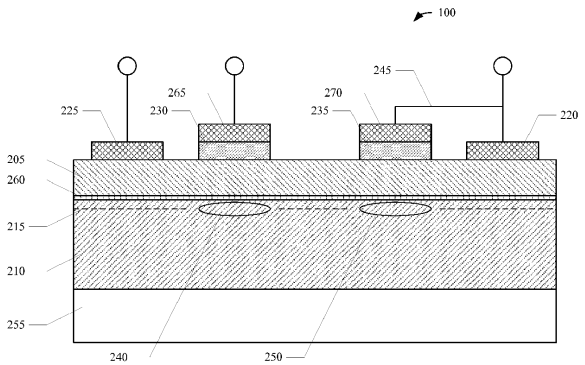

FIG. 2

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