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(54) Title: SYSTEMS AND METHODS OF NON-VOLATILE MEMORY SENSING INCLUDING SELECTIVE/DIFFERENTIAL THRESHOLD VOLTAGE FEATURES

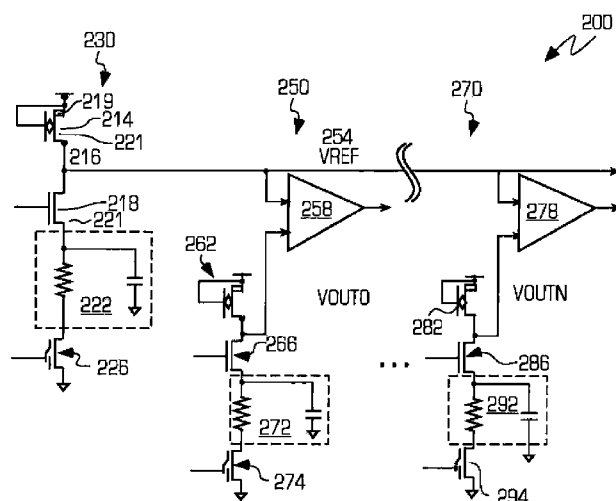


FIG. 2

(57) Abstract: Systems and methods are disclosed for providing selective threshold voltage characteristics via use of MOS transistors having differential threshold voltages. In one exemplary embodiment, there is provided a metal oxide semiconductor device comprising a substrate of semiconductor material having a source region, a drain region and a channel region therebetween, an insulating layer over the channel region, and a gate portion of the insulating layer. Moreover, with regard to the device, the shape of the insulating layer and/or the shape or implantation of a junction region are of varied dimension as between the gate-to-drain and gate-to-source junctions to provide differential threshold voltages between them.