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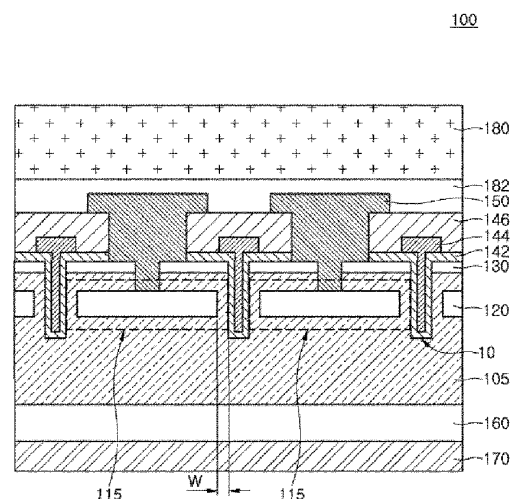
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(54) **Nitride-based transistors and methods of fabricating the same**

(57) A method of fabricating a nitride-based transistor is provided. The method includes sequentially forming a first nitride-based semiconductor layer doped with first type dopants, a second nitride-based semiconductor layer doped with second type dopants, and a third nitride-based semiconductor layer doped with the first type dopants on a substrate. A first trench is formed to penetrate the third and second nitride-based semiconductor layers and to extend into the first nitride-based semiconductor layer. A fourth nitride-based semiconductor layer doped with the first type dopants is formed to fill the first trench. A second trench is formed in the fourth nitride-based semiconductor layer. A gate electrode is formed in the second trench. A source electrode is formed to be electrically connected to at least one of the third and fourth nitride-based semiconductor layers, and a drain electrode is formed to be electrically connected to the first nitride-based semiconductor layer.

FIG. 1



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