

ABSTRACT

Semiconductor memory devices are provided. A semiconductor memory device includes an isolation layer in a first trench and a first gate electrode portion on the isolation layer. The semiconductor memory device includes a second gate electrode portion in a second trench. In some embodiments, the second gate electrode portion is wider, in a direction, than the first gate electrode portion. Moreover, in some embodiments, an upper region of the second trench is spaced apart from the first trench by a greater distance, in the direction, than a lower region of the second trench. Related methods of forming semiconductor memory devices are also provided.

FIG. 1