WHAT IS CLAIMED IS:

1. A method of manufacturing a semiconductor memory device, the method comprising:

forming a stepped stack structure including a lower first material layer, an upper first material layer disposed to be spaced apart from the lower first material layer in a first direction, and a second material layer between the lower first material layer and the upper first material layer, wherein an end portion of the second material layer extends farther than the upper first material layer in a second direction perpendicular to the first direction;

forming a sacrificial pad on the end portion of the second material layer;

forming a hole penetrating the lower first material layer, the second material layer, and the sacrificial pad;

removing a portion of each of the lower first material layer and the second material layer through the hole such that a first recess region is formed under the sacrificial pad;

forming a first tubular insulating pattern in the first recess region;

removing the sacrificial pad such that a trench is formed; and

forming a conductive gate contact in the trench and a central region of the first tubular insulating pattern.

2. The method of claim 1, wherein the first recess region and the

first tubular insulating pattern extend in the first direction to form a common plane with the lower first material layer and the second material layer.

3. The method of claim 1, further comprising, before the sacrificial pad is removed:

forming a sacrificial pillar inside the hole;

forming a slit penetrating the stepped stack structure;

replacing the second material layer with a conductive layer through the slit; and

removing the sacrificial pillar such that the first tubular insulating pattern and the sacrificial pad are exposed.

4. The method of claim 3, wherein replacing the second material layer with the conductive layer through the slit includes:

removing the second material layer through the slit such that a gate region is opened;

forming a blocking insulating layer along a top surface of the lower first material layer, a bottom surface of the upper first material layer, and an outer wall of the first tubular insulating pattern, which are exposed through the gate region; and

forming the conductive layer inside the gate region opened by the blocking insulating layer.

5. The method of claim 4, wherein the sacrificial pad is removed after the conductive layer is formed, and

wherein the method further comprises removing a portion of the blocking insulating layer such that the conductive layer is exposed, after the sacrificial pad is removed.

6. The method of claim 1, further comprising:

forming a gap fill insulating layer covering the stepped stack structure and the sacrificial pad; and

forming a slit penetrating the gap fill insulating layer and the stepped stack structure,

wherein the hole extends in the first direction to penetrate the gap fill insulating layer,

wherein a second recess region in which a side portion of the gap fill insulating layer is etched through the hole is formed, while the first recess region is formed, and

wherein a second tubular insulating pattern is formed in the second recess region, while the first tubular insulating pattern is formed.

7. The method of claim 6, further comprising removing the second material layer through the slit and the trench such that a gate region is opened,

wherein forming the conductive gate contact includes forming a conductive layer filling the gate region and the trench, the conductive

layer extending along an inner wall of the first tubular insulating pattern and an inner wall of the second tubular insulating pattern.

8. The method of claim 7, wherein the conductive layer includes a gate electrode pattern inside the gate region and a tubular conductive pattern extending to the inside of the trench and the hole from the gate electrode pattern.

9. The method of claim 8, wherein forming the conductive gate contact further includes forming a core conductive pattern in a central region of the tubular conductive pattern.