MEMORY CELL AND MANUFACTURING METHOD THEREOF, AND MEMORY AND MANUFACTURING METHOD THEREOF

ABSTRACT

The present disclosure provides a memory cell and a manufacturing method thereof, and a memory and a manufacturing method thereof, and relates to the technical field of semiconductors. The memory cell includes a first dielectric layer and a second dielectric layer that are stacked. A first transistor is disposed in the first dielectric layer. A second transistor is disposed in the second dielectric layer. The first dielectric layer is connected to the second dielectric layer by using a connecting wire. In the present disclosure, a parasitic capacitance in the first transistor or the second transistor is used as a memory element to replace the capacitor in the related art~~, such that the volume occupied by the memory cells can be reduced, to ensure that the memory cells are developed in an integration direction~~. In addition, the first transistor and the second transistor are both metal-oxide thin-film transistors~~, such that the memory can have longer retention time of charge, to improve the performance of the memory while decreasing the volume of the memory~~.

FIG. 2