

SEMICONDUCTOR STRUCTURE AND MANUFACTURING METHOD THEREOF

ABSTRACT

The disclosure provides a semiconductor structure and a manufacturing method thereof, which relate to the field of semiconductors and solve the problem of serious leakage. The semiconductor structure includes a substrate with a plurality of word line trenches and source/drain regions each adjacent to each word line trench; a word line located in the word line trench, which includes a first conductive layer, a single junction layer and a second conductive layer stacked in sequence, in which the first conductive layer is located at a bottom of the word line trench, a projection of the word line on a sidewall of the word line trench and the projection of the source/drain region on the sidewall of the word line trench have an overlapping region with a preset height, and when a voltage applied to the word line is less than a preset voltage, a resistance of the single junction layer is greater than the preset resistance, to make the first conductive layer and the second conductive layer disconnected. The semiconductor structure provided by this disclosure is used for increasing the driving current and mitigating the leakage phenomenon.

[Fig. 3]