

ABSTRACT

An operating method of a nonvolatile memory device for programming multi-page data, the operating method including: receiving the multi-page data from a memory controller; programming first page data among the multi-page data to first memory cells connected to a word line adjacent to a selected word line; reading previous page data previously stored in second memory cells connected to the selected word line based on a first sensing value and a second sensing value after programming the first page data; calculating a first fail bit number by comparing first bits of the previous page data read based on the first sensing value to second bits of the previous page data read based on the second sensing value; and programming the previous page data read from the second memory cells and second page data among the multi-page data to the second memory cells based on the first fail bit number.

FIG. 7