

## ABSTRACT

A memory device may include a peripheral circuit and a control circuit. The peripheral circuit performs a program operation on memory cells, verifies the memory cells based on a target voltage and a pre-target voltage, and applies bit line voltages to bit lines. The control circuit controls the peripheral circuit to determine the memory cells to be initial cells programmed, adjacent cells programmed, and complete cells programmed, adjusts timings at which the bit line voltages are to be applied to bit lines connected to the initial cells programmed, the adjacent cells programmed, and the complete cells programmed. In performing these operations, the control circuit controls the peripheral circuit to adjust the timing of a voltage to be applied to a bit line connected to the adjacent cells programmed depending on a number of at least one of the initial cells programmed, the adjacent cells programmed, or the complete cells programmed.

FIG. 10