

METHOD AND DEVICE FOR IRREVERSIBLY PROGRAMMING AND READING
NONVOLATILE MEMORY CELLS

ABSTRACT

In a nonvolatile memory device, data stored in a memory cell (21a, 21b) are associated to whether or not the memory cell is switchable between a first state and a second state. Memory cells are irreversibly programmed by applying an irreversible programming signal (I_{IRP}), such that the nonvolatile memory cells (21a) are made not switchable between the first state and the second state in response to the irreversible programming signal (I_{IRP}). Reading memory cells includes: assessing (100, 110, 120, 140, 150, 160) whether a memory cell (21a, 21b) is switchable between a first state and a second state; determining that a first irreversible logic value ("1") is associated to the memory cell (21a); if the memory cell (21a) is not switchable between the first state and the second state (130); and determining that a second irreversible logic value ("0") is associated to the memory cell (21b), if the memory cell (21b) is switchable between the first state and the second state (170).

Figures 2a, 4