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(54) **HAMMING WEIGHT CALCULATION METHOD BASED ON OPERATION APPARATUS**

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(57) **ABSTRACT**

The present application discloses a Hamming weight calculation method performed by an operation apparatus. The operation apparatus includes a controller and a first calculator, wherein the controller sets an initial resistance state of the first memory to a low resistance state; determines a first gate voltage of the first transistor based on first bit data in a first binary sequence, and control an on-off state of the first transistor based on the first gate voltage; controls a target resistance state of the first memory based on the on-off state of the first transistor; and determines a Hamming weight of the first bit data based on a first output current on the source of the first transistor.

Set an initial resistance state of a memory to a low resistance state — 301

Control an on-off state of a transistor in an operation unit based on an input binary sequence — 302

Control a target resistance state of the memory in the operation unit based on the on-off state of the transistor — 303

Determine a Hamming weight of the binary sequence based on an output current on a source of the transistor — 304