

ABSTRACT

A semiconductor memory device includes a memory cell array and a plurality of data input/output (I/O) pins. The plurality of data I/O pins is configured to receive write data to be stored in the memory cell array or to output read data stored in the memory cell array. The semiconductor memory device is configured to perform a burst operation in which a single data set comprising a plurality of data bits is input or output through the plurality of data I/O pins based on a single command received from an external memory controller. A number of the plurality of data I/O pins corresponds to an integer that is not a power-of-two. A burst length representing a unit of the burst operation corresponds to an integer that is not a power-of-two.

FIG. 1