

ABSTRACT

A method of controlling on-die termination (ODT) in a multi-rank system including a plurality of memory ranks is provided. The method includes: enabling ODT circuits of the plurality of memory ranks into an initial state when the multi-rank system is powered on; enabling the ODT circuits of a write target memory rank and non-target memory ranks among the plurality of memory ranks during a write operation; and disabling the ODT circuit of a read target memory rank among the plurality of memory ranks while enabling the ODT circuits of non-target memory ranks among the plurality of memory ranks during a read operation.

FIG. 1