ABSTRACT

A semiconductor device includes a first conductive plate structure and a second conductive plate structure, arranged at a same vertical level on a semiconductor chip and horizontally spaced apart from each other on the semiconductor chip, a first structure on the first conductive plate structure and including first separation structures and first memory blocks, and a second structure on the second conductive plate structure and including second separation structures and second memory blocks. The first memory blocks are spaced apart from each other by the first separation structures, and extend in parallel to each other in a first horizontal direction. The second memory blocks are spaced apart from each other by the second separation structures, and extend in parallel to each other in a second horizontal direction. The first and second horizontal directions are parallel to an upper surface of the first conductive plate structure, and perpendicular to each other.

FIG. 1