ABSTRACT

A semiconductor device includes a cell region in which a channel structure is disposed and memory cells arranged in three dimensions are disposed, a cell contact region in which a cell contact plug is disposed, a common source line contact region in which a common source line contact plug is disposed, an input and output contact region in which an input and output contact plug is disposed, a word line cut region configured to separate word lines of the cell region from word lines of a neighboring cell region, a common source line layer configured to connect the channel structure and the common source line contact plug, and an input and output pad connected to the input and output contact plug. The common source line layer and the input and output pad are disposed at the same vertical level.

FIG. 1