

SEMICONDUCTOR STRUCTURE AND METHOD FOR MANUFACTURING SEMICONDUCTOR STRUCTURE

ABSTRACT

Disclosed belong to the technical field of semiconductor manufacturing, and in particular, relate to a semiconductor structure and a method for manufacturing a semiconductor structure. The semiconductor structure includes a first capacitive structure located on a substrate and first support columns. A plurality of first support columns are disposed on the substrate in parallel and spaced apart from each other, and are located in a same plane parallel to the substrate. The first capacitive structure includes a first lower electrode layer, a first dielectric layer and a first upper electrode layer. The semiconductor structure further includes a plurality of first segmentation trenches. The first segmentation trenches divide the first capacitive structure into a plurality of capacitors. A first insulation layer is disposed between the corresponding first lower electrode layers of the adjacent capacitors. The corresponding first upper electrode layers of the adjacent capacitors are electrically connected to each other. The first insulation layer isolates the adjacent capacitors, the corresponding first lower electrode layers of the adjacent capacitors are electrically connected to each other, and the corresponding first upper electrode layers of the adjacent capacitors are electrically connected to each other, so that a parallel connection between the adjacent capacitors can be realized, thereby increasing capacitance.

[Fig. 1a]