

ABSTRACT

A semiconductor device and a manufacturing method thereof are provided, and the semiconductor device includes:

a substrate; common electrode structures stacked on the substrate in a first direction,
5 where the first direction intersects the substrate; stacked array structures including first
electrode structures, where the first electrode structures are stacked on the substrate in the first
direction and are electrically connected to the common electrode structures disposed at the
same layers with the first electrode structures; first lead-out structures stacked in the first
direction and connected to the common electrode structures disposed at the same layers with
10 the first lead-out structures, where the first lead-out structures include first lead-out wires and
first pseudowires that are disposed opposite to each other, and the first lead-out wires and the
first pseudowires in the different first lead-out structures are alternately disposed in the first
direction; and second lead-out structures including second contact pads and second contact
plugs, where the second contact pads are disposed at the same layers with the corresponding
15 first lead-out wires and are electrically connected to the corresponding common electrode
structures through the corresponding first lead-out wires, the second contact plugs are
disposed on the second contact pads, and the second contact plugs are staggered from each
other in the first direction.

[FIG. 1]