

# (19) United States

## (12) Patent Application Publication (10) Pub. No.: US 2024/0215225 A1 Kim et al.

### Jun. 27, 2024 (43) **Pub. Date:**

#### (54) SEMICONDUCTOR DEVICE INCLUDING SPACER STRUCTURE HAVING AIR GAP

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(21) Appl. No.: 18/391,835

Filed: (22)Dec. 21, 2023

(30)Foreign Application Priority Data

Dec. 23, 2022 (KR) ..... 10-2022-0182798

#### **Publication Classification**

(51) Int. Cl. H10B 12/00 (2006.01)H01L 21/764 (2006.01) (52) U.S. Cl. CPC ....... H10B 12/482 (2023.02); H01L 21/764 (2013.01); H10B 12/0335 (2023.02); H10B 12/315 (2023.02)

#### (57)**ABSTRACT**

A semiconductor device includes a line structure on the lower structure and including a conductive pattern and an insulating capping pattern on the conductive pattern, a contact structure including a lower portion adjacent to a side surface of the line structure and an upper portion on the lower portion, a spacer structure between a side surface of the lower portion of the contact structure and the side surface of the line structure, an insulating separation pattern on the spacer structure, and a protective layer between the upper portion of the contact structure and the insulating separation pattern. The spacer structure includes an internal spacer, an external spacer, and an air gap between the internal spacer and the external spacer. Regions of the internal spacer and the external spacer exposed by the air gap include an oxide. The insulating separation pattern seals at least a portion of an upper portion of the air gap.

