



US 20240215216A1

(19) **United States**(12) **Patent Application Publication**
KIM et al.(10) **Pub. No.: US 2024/0215216 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **SEMICONDUCTOR DEVICE AND METHOD
FOR FABRICATING THE SAME**(52) **U.S. Cl.**CPC **H10B 12/03** (2023.02); **H10B 12/482**
(2023.02); **H10B 12/488** (2023.02)(71) Applicant: **SK hynix Inc.**, Gyeonggi-do (KR)(72) Inventors: **Seung Hwan KIM**, Gyeonggi-do (KR);
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ABSTRACT(21) Appl. No.: **18/324,152**(22) Filed: **May 26, 2023**(30) **Foreign Application Priority Data**

Dec. 23, 2022 (KR) 10-2022-0183333

Publication Classification(51) **Int. Cl.****H10B 12/00** (2006.01)

A method for fabricating a semiconductor device includes: forming a semiconductor layer pattern over a lower structure; forming a gate dielectric layer to cover surfaces of the semiconductor layer pattern; forming a conductive layer over the gate dielectric layer to surround the semiconductor layer pattern, the conductive layer including a first edge portion and a second edge portion that are facing each other; and forming a pair of horizontal conductive lines vertically overlapping the semiconductor pattern by horizontally recessing the first edge portion and the second edge portion of the conductive layer.

