



US 20240237563A9

(19) **United States**
(12) **Patent Application Publication**
Ode et al.

(10) **Pub. No.: US 2024/0237563 A9**
(48) **Pub. Date: Jul. 11, 2024**
CORRECTED PUBLICATION

(54) **SEMICONDUCTOR MEMORY DEVICE**

Publication Classification

(71) Applicant: **Kioxia Corporation**, Tokyo (JP)
(72) Inventors: **Hiroyuki Ode**, Yokkaichi Mie (JP);
Kotaro NODA, Yokkaichi Mie (JP)
(73) Assignee: **Kioxia Corporation**, Tokyo (JP)
(21) Appl. No.: **18/396,275**
(22) Filed: **Dec. 26, 2023**

(51) **Int. Cl.**
H10N 70/00 (2006.01)
H10B 63/00 (2006.01)
H10N 70/20 (2006.01)
(52) **U.S. Cl.**
CPC **H10N 70/841** (2023.02); **H10B 63/80**
(2023.02); **H10N 70/231** (2023.02); **H10N**
70/826 (2023.02)

Prior Publication Data

(15) Correction of US 2024/0138274 A1 Apr. 25, 2024
See (30) Foreign Application Priority Data.
(65) US 2024/0138274 A1 Apr. 25, 2024

Related U.S. Application Data

(63) Continuation of application No. 17/738,512, filed on
May 6, 2022, now Pat. No. 11,889,777, which is a
continuation of application No. 17/021,655, filed on
Sep. 15, 2020, now Pat. No. 11,349,073.

Foreign Application Priority Data

Mar. 19, 2020 (JP) 2020-049030

(57) **ABSTRACT**

A semiconductor memory device includes a first wiring to a fifth wiring, a plurality of memory cells disposed between the wirings, and a first contact electrode to a third contact electrode. The first contact electrode is disposed between the first wiring and the fifth wiring, and is electrically connected to the first wiring and the fifth wiring. The second contact electrode is disposed between the first contact electrode and the fifth wiring, and is electrically connected to the first wiring and the fifth wiring. The third contact electrode is disposed between the second contact electrode and the fifth wiring, and is electrically connected to the first wiring and the fifth wiring. The second contact electrode has a width larger than a width of the first contact electrode and larger than a width of the third contact electrode.

