



US 20240237545A1

(19) **United States**

(12) **Patent Application Publication**

TSENG et al.

(10) **Pub. No.: US 2024/0237545 A1**

(43) **Pub. Date:**

Jul. 11, 2024

(54) **MEMORY DEVICE AND INTEGRATED CIRCUIT DEVICE**

division of application No. 16/721,789, filed on Dec. 19, 2019, now Pat. No. 11,362,267.

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Publication Classification

(51) **Int. Cl.**
H10N 50/10 (2006.01)
H10N 50/01 (2006.01)
H10N 50/80 (2006.01)

(52) **U.S. Cl.**
CPC *H10N 50/10* (2023.02); *H10N 50/01* (2023.02); *H10N 50/80* (2023.02)

(57) **ABSTRACT**

(21) Appl. No.: **18/608,365**

(22) Filed: **Mar. 18, 2024**

Related U.S. Application Data

(60) Continuation of application No. 17/839,326, filed on Jun. 13, 2022, now Pat. No. 11,963,460, which is a

A memory device includes a bottom electrode, a resistance switching element over the bottom electrode, a top electrode over the resistance switching element, and a dielectric layer. The dielectric layer surrounds the bottom electrode, the resistance switching element, and the top electrode. The resistance switching element has a first portion between the top electrode and the dielectric layer.

