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ISHIDA et al.(10) **Pub. No.: US 2024/0251559 A1**(43) **Pub. Date: Jul. 25, 2024**(54) **NON-VOLATILE MEMORY DEVICE**

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H10B 43/35 (2006.01)(73) Assignee: **Kioxia Corporation**, Tokyo (JP)(21) Appl. No.: **18/624,967**(52) **U.S. Cl.**
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(57) **ABSTRACT**

According to an embodiment, a non-volatile memory device includes first electrodes stacked on an underlying layer, a second electrode provided on the first electrodes, a semiconductor layer extending in a first direction from the underlying layer to the second electrode, and a memory film provided between each of the first electrodes and the semiconductor layer. The semiconductor layer includes a first portion adjacent to the first electrodes and a second portion adjacent to the second electrode. The second portion has a thickness thinner than a thickness of the first portion in a second direction perpendicular to the first direction.

