

[ABSTRACT]

A resistance change memory device with a high ON/OFF ratio can be provided.

5 A resistance change memory device according to an embodiment includes a first electrode containing a first element, a resistance change layer provided on the first electrode and containing an oxide of the first element, an oxygen conductive layer provided on the resistance change layer, containing a second element and oxygen, having oxygen ion conductivity, and having
10 a relative permittivity higher than a relative permittivity of the resistance change layer, and a second electrode provided on the oxygen conductive layer. The resistance change layer undergoes dielectric breakdown earlier than the oxygen conductive layer when a voltage between the first electrode and the second
15 electrode is continuously increased from zero.