

ABSTRACT

A high-performance CB-RAM having a low operating voltage and a high switching endurance even when alumina is used for the insulator layer is provided. In a conductive bridge memory device, an electrolyte layer 4 impregnated in a pore 3a of an insulator layer 3 is configured to be comprising a mixed ionic liquid in which is mixed a solvate ionic liquid, and a low-viscous ionic liquid being an ionic liquid having a viscosity coefficient smaller than that of the solvate ionic liquid.