MEMORY DEVICE, SEMICONDUCTOR DEVICE, AND ELECTRONIC DEVICE

An object is to provide a memory device which does not need a complex manufacturing process and whose power consumption can be suppressed, and a semiconductor device including the memory device. A solution is to provide a capacitor which holds data and a switching element which controls storing and releasing charge in the capacitor in a memory element. In the memory element, a phase-inversion element such as an inverter or a clocked inverter includes the phase of an input signal is inverted and the signal is output. For the switching element, a transistor including an oxide semiconductor in a channel formation region is used. In the case where application of a power supply voltage to the phase-inversion element is stopped, the data is stored in the capacitor, so that the data is held in the capacitor even when the application of the power supply voltage to the phase-inversion element is stopped.

Figure 1