CLAIMS

1. A semiconductor device comprising:

a first transistor, a channel region of the first transistor comprising an oxide semiconductor;

a second transistor;

a capacitor, one electrode of the capacitor electrically connected to one of a source and a drain of the first transistor and a gate of the second transistor;

a word line electrically connected to a gate of the first transistor;

a first wiring electrically connected to one of a source and a drain of the second transistor;

a bit line electrically connected to the other of the source and the drain of the first transistor and the other of the source and the drain of the second transistor;

a capacitor line electrically connected to the other electrode of the capacitor;

a driver directly connected to the first wiring, the driver including a decoder, a switch circuit, a third transistor, a fourth transistor, a second wiring, and a third wiring; and

an A/D converter directly connected to the first wiring,

wherein the second wiring is capable of supplying a first potential,

wherein the third wiring is capable of supplying a second potential different from the first potential,

wherein the decoder is electrically connected to the first wiring through the switch circuit,

wherein the second wiring is directly connected to the first wiring through the third transistor, and

wherein the third wiring is directly connected to the first wiring through the fourth transistor.

2. The semiconductor device according to claim 1, wherein the A/D converter is configured to convert a potential of the first wiring into a digital value and output the digital value outside.

3. The semiconductor device according to claim 1, wherein the second transistor is an n-channel transistor.

4. The semiconductor device according to claim 1, wherein the second transistor is a p-channel transistor.

5. The semiconductor device according to claim 1, wherein a channel region of the second transistor includes silicon.