WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a converter circuit;

a selector circuit;

a first amplifier circuit;

a second amplifier circuit; and

a buffer circuit,

wherein the converter circuit is configured to generate a first voltage and a second voltage from an (N–M)-bit signal of an N-bit signal,

wherein N is a natural number of 2 or more and M is a natural number smaller than N,

wherein the first voltage is higher than the second voltage,

wherein the selector circuit is configured to generate a first current from an M-bit signal of the N-bit signal and output the first current to the first amplifier circuit,

wherein the buffer circuit is configured to generate a third voltage from currents output from the first amplifier circuit and the second amplifier circuit,

wherein when the first voltage is supplied to a non-inverting input terminal of the first amplifier circuit, the second voltage is supplied to an inverting input terminal of the first amplifier circuit and a non-inverting input terminal of the second amplifier circuit, and the third voltage is supplied to an inverting input terminal of the second amplifier circuit, and

wherein when the second voltage is supplied to the non-inverting input terminal of the first amplifier circuit, the first voltage is supplied to the inverting input terminal of the first amplifier circuit and the non-inverting input terminal of the second amplifier circuit, and the third voltage is supplied to the inverting input terminal of the second amplifier circuit.

2. The semiconductor device according to claim 1, wherein the first amplifier circuit is directly connected to a current control circuit.

3. The semiconductor device according to claim 1, wherein the converter circuit comprises a plurality of resistors connected in series and a plurality of pass transistors.

4. A display panel comprising:
the semiconductor device according to claim 1; and
a display portion.

5. A display module comprising:
the display panel according to claim 4; and
a touch panel.

6. An electronic device comprising:
the display panel according to claim 4; and
at least one of an operation button, a speaker, and a microphone.

7. The semiconductor device according to claim 1, wherein the converter circuit is a digital-to-analog converter circuit.

8. The semiconductor device according to claim 1, wherein the buffer circuit is an output buffer.

9. A semiconductor device comprising:
a first amplifier circuit;
a second amplifier circuit;
a converter circuit being electrically connected to a non-inverting input terminal of the first amplifier circuit, an inverting input terminal of the first amplifier circuit, and a non-inverting input terminal of the second amplifier circuit;
a selector circuit being electrically connected to the first amplifier circuit; and
a buffer circuit being electrically connected to the first amplifier circuit and the second amplifier circuit,

wherein the converter circuit is configured to generate a first voltage and a second voltage from an (*N*–*M*)-bit signal of an *N*-bit signal,

wherein *N* is a natural number of 2 or more and *M* is a natural number smaller than *N*,

wherein the first voltage is higher than the second voltage,

wherein the selector circuit is configured to generate a first current from an *M*-bit signal of the *N*-bit signal and output the first current to the first amplifier circuit, and

wherein the buffer circuit is configured to generate a third voltage from currents output from the first amplifier circuit and the second amplifier circuit.

10. The semiconductor device according to claim 9, wherein the first amplifier circuit is directly connected to a current control circuit.

11. The semiconductor device according to claim 9, wherein the converter circuit comprises a plurality of resistors connected in series and a plurality of pass transistors.

12. A display panel comprising:
the semiconductor device according to claim 12; and
a display portion.

13. A display module comprising:
the display panel according to claim 12; and
a touch panel.

14. An electronic device comprising:
the display panel according to claim 12; and
at least one of an operation button, a speaker, and a microphone.

15. The semiconductor device according to claim 9, wherein the converter circuit is a digital-to-analog converter circuit.

16. The semiconductor device according to claim 9, wherein the buffer circuit is an output buffer.

17. A method for driving a semiconductor device comprising first and second amplifier circuits, a converter circuit, a selector circuit, and a buffer circuit, the method comprising the steps of:

supplying an (N–M)-bit signal of an N-bit signal to the converter circuit, wherein N is a natural number of 2 or more and M is a natural number smaller than N, thereby generating a first voltage and a second voltage from the (N–M)-bit signal of the N-bit signal, wherein the first voltage is higher than the second voltage;

supplying an M-bit signal of the N-bit signal to the selector circuit, thereby generating a first current and outputting the first current to the first amplifier circuit; and

supplying currents output from the first amplifier circuit and the second amplifier circuit to the buffer circuit, thereby generating a third voltage,

wherein when the first voltage is supplied to a non-inverting input terminal of the first amplifier circuit, the second voltage is supplied to an inverting input terminal of the first amplifier circuit and a non-inverting input terminal of the second amplifier circuit, and the third voltage is supplied to an inverting input terminal of the second amplifier circuit, and

wherein when the second voltage is supplied to the non-inverting input terminal of the first amplifier circuit, the first voltage is supplied to the inverting input terminal of the first amplifier circuit and the non-inverting input terminal of the second amplifier circuit, and the third voltage is supplied to the inverting input terminal of the second amplifier circuit.

18. The method according to claim 17, wherein the converter circuit is a digital-to-analog converter circuit.

19. The method according to claim 17, wherein the buffer circuit is an output buffer.