

ABSTRACT

A grayscale voltage generator circuit that is less likely to be influenced by the offset voltage is provided. The grayscale voltage generator circuit is a semiconductor device that includes a D/A converter circuit, a first G_m amplifier, a second G_m amplifier, a current control circuit, an output buffer, and a selector circuit. The D/A converter circuit generates a first voltage and a second voltage from an upper bit of a digital signal. The current control circuit generates a first current from a lower bit of the digital signal and functions as a current source of the first G_m amplifier. The output buffer generates a third voltage from currents output from the first G_m amplifier and the second G_m amplifier. The third voltage is input to the second G_m amplifier. The selector circuit selects voltages that are to be input to the first G_m amplifier and the second G_m amplifier.

Fig. 1