Summary

Using technology which uses a single shift register and simultaneously generates multiple pulses, this invention is a liquid crystal display device which rapidly drives data lines.

It is possible to increase the frequency of the shift register output signal without changing the frequency of the shift register operation clock. If the shift register output signals, by means of analog switches, are used to determine the video signal sampling timing, high speed data line driving can be realized.

Additionally, if the output signals of the shift register mentioned above are used to determine the video signal latch timing in a digital driver, high speed latching of the video signal can be realized. Consequently, even if the driving circuits of the liquid crystal display matrix are composed of TFTs, high speed operation of the driving circuits is possible without increasing power consumption.

The shift register can also be used to inspect the electrical characteristics of the data lines and analog switches.