

ABSTRACT

Relay switches are provided between the output terminals of multiplexers in a certain layer in a tree structure and an input terminal of a multiplexer in a layer that is one level higher than the certain layer; the relay switch connected to the multiplexer, among the multiplexers in the certain layer, that is involved in selecting a signal is turned ON and the relay switches connected to the other multiplexers are turned OFF, whereby the resistance components and the capacitance components of the multiplexers whose corresponding relay switches have been turned OFF can be disconnected from the tree structure, thereby reducing the value of the time constant CR that affects the operating speed of the multiplexer. As a result, the disadvantage that the increase in the time constant decelerates the operating speed of the entire multiplexer circuit can be suppressed.