Abstracts

Filter Requirements for Nanosecond Diode Switching

R.V. Garver and T.H. Mak. "Filter Requirements for Nanosecond Diode Switching." 1966 G-MTT International Microwave Symposium Digest 66.1 (1966 [MWSYM]): 108-113.

In some applications of diode switches, such as in a switch- protected radar receiver, high speed switching is required in conjunction with a high degree of suppression of switching transients appearing at the rf terminals of the switch. The minimum switching time of a series or shunt diode switch is derived to be 1.24/f/sub o/, where f/sub o/ is the rf frequency being switched. The suppression of switching transients is derived, and it is found that suppression can be increased at the cost of increased filter complexity and switching time above the theoretical minimum. An example is presented utilizing the derived relationships.

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