

Abstracts

W-Band SPST Transistor Switches

H. Takasu, F. Sasaki, H. Kawasaki, H. Tokuda and S. Kamihashi. "W-Band SPST Transistor Switches." 1996 Microwave and Guided Wave Letters 6.9 (Sep. 1996 [MGWL]): 315-316.

A single-pole, single-throw (SPST) transistor switch has been developed. Three types of switches, that is, GaAs MESFET, AlGaAs/GaAs HEMT, and pseudomorphic HEMT (PM-HEMT), have been fabricated, and the performances at W-band are compared. To reduce on-state resistance and off-state capacitance, a gate length was varied as a parameter. Moreover, an inductance for resonance was installed in parallel to the off-state capacitance between source and drain to obtain a high isolation. A relatively low insertion loss of 1.6 dB and a high isolation over 20 dB at W-band have been obtained from the 0.8- μm gate length PM-HEMT.

 [Return to main document.](#)