Abstracts

Modeling and Performance of a Sub-Nanosecond High Isolation DC-18 GHz Monolithic SPST with Driver

A. Mallet-Guy, D. Ariel, J.L. LaCombe, D. Levy, P. Marsot and T. Thibout. "Modeling and Performance of a Sub-Nanosecond High Isolation DC-18 GHz Monolithic SPST with Driver." 1991 MTT-S International Microwave Symposium Digest 91.1 (1991 Vol. I [MWSYM]): 193-196.

The design, computed performance using linear and non linear modeling and experimental results of a DC-18 GHz high-isolation ultra-fast monolithic SPST switch with driver are presented. A non linear modeling of the SPST and of the driver was carried out in order to predict the switching time of the overall circuit. The monolithic SPST design uses GaAs FETs and the driver uses GaAs devices in order to reach a very short switching time. Insertion loss less than 2.4 dB, a typical isolation of 50 dB and a switching time less tlhan 1 ns, driver included, were obtained. The validity of the non linear-models used were demonstrated by the good agreement obtained between the simulated and the measured performance.

❑ Return to main document.