Abstracts

High Isolation and Low Insertionion Loss Switch IC Using GaAs (Short Papers)

Y. Ota, M. Sakakura, K. Fujimoto, S. Yamamoto and H. Fujimoto. "High Isolation and Low Insertionion Loss Switch IC Using GaAs (Short Papers)." 1995 Transactions on Microwave Theory and Techniques 43.9 (Sep. 1995, Part I [T-MTT]): 2175-2177.

A novel RF switch IC using GaAs MESFET's has been developed for digital communication systems. The new IC is composed of a three-stage SPST switch and a thin film termination resistor, which realizes a high isolation and a low return loss. In addition, a high power handling capability and a low insertion loss are simultaneously realized with two kinds of pinch-off voltages using the orientation effect of GaAs MESFET's. According to these technologies, the (excellent performance is achieved as follows: the isolation of 60 dB, the return loss of 20 dB, the 1 dB power compression of 27 dBm and the insertion loss of 1.6 dB at a frequency of 1.9 GHz with control voltages of 0/--5 V. The new switch IC contributes to a variety of communication system using high-quality digital modulation.

❑ Return to main document.