Abstracts

A Novel Resonant-Type GaAs SPDT Switch IC with Low Distortion Characteristics for 1.9 GHz Personal Handy-Phone System

K. Kawakyu, Y. Ikeda, M. Nagaoka, K. Ishida, A. Kameyama, T. Nitta, M. Yoshimura, Y. Kitaura and N. Uchitomi. "A Novel Resonant-Type GaAs SPDT Switch IC with Low Distortion Characteristics for 1.9 GHz Personal Handy-Phone System." 1996 MTT-S International Microwave Symposium Digest 96.2 (1996 Vol. II [MWSYM]): 647-650.

A GaAs SPDT switch IC operating at a low power supply voltage of 2.7 V has been developed for use in Personal Handy-Phone System in the 1.9 GHz band. In combination with MESFETs with low on-resistance and high breakdown voltage, the resonant-type switch IC utilizes stacked FETs and an additional shunt capacitor at the receiver side in order to realize low insertion loss, high isolation and low distortion characteristics. An insertion loss of 0.55 dB and an isolation of 35.8 dB were obtained at 1.9 GHz. The IC also achieved a second order distortion of -54.3 dBc and an adjacent channel leakage power of -66 dBc at 600 kHz apart from 1.9 GHz at 19 dBm output power.

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