Abstracts

A Varactor-Tuned, Active Microwave Band-Pass Filter

C.-Y. Chang and T. Itoh. "A Varactor-Tuned, Active Microwave Band-Pass Filter." 1990 MTT-S International Microwave Symposium Digest 90.1 (1990 Vol. I [MWSYM]): 499-502.

A new microwave tunable high-Q active band-pass filter was developed using a varactor diode for tuning, and a MESFET to provide negative resistance for increasing the tank circuit Q-value. Tuning ranges of 500 MHz for the one-pole filter and 430 MHz for the two-pole filter are achieved with the center frequency of 10 GHz, A 3-dB bandwidth of 20 MHz for the one-pole filter and 80 MHz for the two-pole filter are obtained. The pass-band insertion loss is typically 0 ± 1dB.

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