Abstracts

Optically-Controlled Tunable CPW Resonators

M.S. Islam, P. Cheung, C.Y. Chang, D.P. Neikirk and T. Itoh. "Optically-Controlled Tunable CPW Resonators." 1990 MTT-S International Microwave Symposium Digest 90.2 (1990 Vol. II [MWSYM]): 949-950.

The use of a Schottky-biased, optically-controlled coplanar waveguide (CPW) in a microwave resonator is investigated. A prototype device consisting of a CPW stop a lightly doped GaAs epi-layer on a semi-insulating GaAs substrate has been fabricated and tested. By making use of Schottky-contacted metal electrodes to reduce loss and increase optical sensitivity, tunable resonance has been achieved, with resonator Q's of approximately 8.4 for resonance near 10 GHz, with a tuning range of about 125 MHz at an optical illumination power of only 34 mW/cm2.

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