Abstracts

An Optically Excited Microwave Ring Resonator on a Gallium Arsenide Substrate

D.S. McGregor, C.S. Park, M.H. Weichold and H.F. Taylor. "An Optically Excited Microwave Ring Resonator on a Gallium Arsenide Substrate." 1989 MTT-S International Microwave Symposium Digest 89.1 (1989 Vol. I [MWSYM]): 225-228.

An optically excited ring resonator has been fabricated on a GaAs substrate. An optical signal, supplied by a laser diode modulated at microwave frequencies, was focused into a voltage biased resonator coupling gap to generate carriers from photoconductivity. Results from measurements of the optically generated microwave signal out of the ring resonator revealed resonant peaks at 3.48 GHz, 6.94 GHz, and 10.3 GHz with Q values of 53.5, 75.4, and 103.0, respectively.

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