Abstracts

Measuring the carrier frequency of single short-duration MW radio-wave pulses

B.D. Zaitsev, V.A. Fedorenko, A.V. Ermolenko and N.I. Sinitsyn. "Measuring the carrier frequency of single short-duration MW radio-wave pulses." 1998 Transactions on Microwave Theory and Techniques 46.7 (Jul. 1998 [T-MTT]): 894-899.

A new method for measuring the carrier frequency of single microwave (MW) radiowave pulse is described, which is based on its transduction to a series of echo pulses using a transversal filter. The analysis of the radio-wave pulses exhibiting constant carrier frequency or frequency modulation is shown to be both theoretically and experimentally feasible with the help of a bulk acoustic-wave delay line. A frequency meter has been developed for single short-duration 2.5-10.5-GHz radiowave pulses, which was demonstrated to be operative under strong radio-interference conditions.

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