Abstracts

A Broadband Tunable Distributed Feedback Resonator

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A tunable Bragg type distributed feedback microwave resonator is presented. The resonator is formed by a transmission line periodically loaded with varactor diodes. A tunable periodic superstructure is superimposed on the transmission line by periodically dc biasing the varactor diodes. Two resonators of this type were fabricated, one on an alumina substrate in coplanar hybrid integrated technology and the second in microstrip on RT-Duroid substrate. With this resonator configuration we achieved a tuning bandwidth from 400 MHz to 4 GHz and 200 MHz to 2 GHz, respectively.

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