Abstracts

A Tunable, Temperature Compensated Hybrid Mode Dielectric Resonators

S.-W. Chen, K.A. Zaki and R.G. West. "A Tunable, Temperature Compensated Hybrid Mode Dielectric Resonators." 1989 MTT-S International Microwave Symposium Digest 89.3 (1989 Vol. III [MWSYM]): 1227-1230.

A thermal and an electromagnetic model of a tunable hybrid mode dielectric double resonator is introduced, and analyzed by the mode matching technique. Results of the analysis shows the temperature sensitivity of the structure as a function of the spacing between the double resonators as well as the other resonator parameters. A simple optimization procedure is described, which enables the design of the resonator to simultaneously have wide tunability range and good thermal stability of the resonant frequency.

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