Abstracts

Analysis and Realization of L-Band Dielectric Resonator Microwave Filters

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The development of space communications necessitates that microwave devices used in satellite systems have good temperature and vibration characteristics, low weight and size. High power L-band dielectric resonator (DR) microwave filters which can solve these problems have been developed and are reported herein. The electromagnetic and electrical parameters of different microwave dielectric resonator structures have been computed by means of the two dimensional and three dimensional finite element method (FEM), which can be applied both for free and forced oscillation systems. In this paper, we propose, design and evaluate the response of a new type of filter using rectangular dielectric resonators excited in their TM/sub 110/ mode.

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