Abstracts

Two-Path Cutoff Waveguide Dielectric Resonator Filters (1985 [MWSYM])

H. Shigesawa, M. Tsuji and K. Takiyama. "Two-Path Cutoff Waveguide Dielectric Resonator Filters (1985 [MWSYM])." 1985 MTT-S International Microwave Symposium Digest 85.1 (1985 [MWSYM]): 357-360.

We propose here a new idea to design filters for achieving new levels of performance. This type of filters is made of a rectangular waveguide with a partial H-plane bifurcation. Each bifurcated section finite in length operates as a cutoff waveguide, at the central part of which low permittivity dielectric resonators are loaded. An accurate CAD program is developed which is based on a procedure that takes into account the effect of not only the dominant, but also a large number of higher order modes generated at discontinuities . Experiments for X-band trial filters designed by a new program show good agreements with the theory.

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