Abstracts

Analysis of Antipodal Ridge Waveguide Structure and Application on Extremely Wide Stopband Lowpass Filter

A.M.K. Saad, J.D. Miller, A. Mitha and R. Brown. "Analysis of Antipodal Ridge Waveguide Structure and Application on Extremely Wide Stopband Lowpass Filter." 1986 MTT-S International Microwave Symposium Digest 86.1 (1986 [MWSYM]): 361-363.

This paper presents an accurate analysis of antipodal ridge W/G structure. Design parameters like the cut-off frequencies of TE/sub 10/ and TE/sub 20/ modes, characteristic impedance and gap impedance have been calculated. Comparison with exact analysis of such structure reported in Literature, shows very good agreement. Using the fact that antipodal ridge structures provide very large bandwidth (about twice that of double ridge W/G structures), a lowpass filter with extremely wide stopband using evanescent mode-antipodal ridge W/G techniques has been developed and tested. Spurious free response up to at least the sixth harmonic has been achieved.

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