Abstracts

Asymmetrical Coplanar Waveguide with Finite Metallization Thickness Containing Anisotropic Media (Short Papers)

T. Kitazawa and T. Itoh. "Asymmetrical Coplanar Waveguide with Finite Metallization Thickness Containing Anisotropic Media (Short Papers)." 1991 Transactions on Microwave Theory and Techniques 39.8 (Aug. 1991 [T-MTT]): 1426-1433.

The spectral-domain approach (SDA) is extended in the present paper for symmetrical and asymmetrical coplanar waveguides with anisotropic media. The quasi-static and the hybrid-mode analytical method are developed in the spectral domain taking the metallization thickness effect into consideration. Numerical computations include the quasi-static and frequency-dependent hybrid-mode values of the phase constants and characteristic impedances for the symmetrical and asymmetrical CPW's and the metallization thickness effects in CPW's. Increased metallization thickness significantly reduces the nonreciprocal properties in CPW with magnetized ferrite and additional dielectric layers.

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