Abstracts

New periodic-loaded electromagnetic bandgap coplanar waveguide with complete spurious passband suppression

F. Martin, F. Falcone, J. Bonache, T. Lopetegi, M.A.G. Laso and M. Sorolla. "New periodic-loaded electromagnetic bandgap coplanar waveguide with complete spurious passband suppression." 2002 Microwave and Wireless Components Letters 12.11 (Nov. 2002 [MWCL]): 435-437.

In this work, coplanar waveguides (CPW) periodically loaded with shunt capacitances and periodically perturbed by varying the distance between the central strip (of constant width) and ground planes are studied. It is demonstrated that the multiple spurious passbands above the Bragg frequency, inherent to the presence of the reactive elements, can be completely and efficiently rejected by means of very simple geometry perturbation. This result is in contrast to previous works, where the rejection of multiple frequencies requires complex layout patterns and reveals that the elimination of spurious frequency bands in periodic loaded CPWs cannot be merely estimated from the Fourier transform of the perturbation geometry.

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