Abstracts

Multilayer and anisotropic planar compact PBG structures for microstrip applications

C. Caloz and T. Itoh. "Multilayer and anisotropic planar compact PBG structures for microstrip applications." 2002 Transactions on Microwave Theory and Techniques 50.9 (Sep. 2002 [T-MTT]): 2206-2208.

Two novel microstrip planar photonic-bandgap (PBG) structures are presented, i.e., a multilayer PBG and an anisotropic PBG. The multilayer PBG, constituted of uniplanar compact (UC) PBGs stacked up below the line, produces huge gaps (> 140 %) through the suppression of parasitic transmission peaks and can achieve a two-fold size reduction with respect to UC-PBGs. The anisotropic PBG is a uniplanar structure exhibiting a propagation direction and an attenuation direction (AD) in a working range of the order of 35%, deep/sharp gaps broader than 65% in the AD, an excellent insensitivity to the line position and an extreme compact size of the order of /spl lambda//2 by /spl lambda//7.

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