

Abstracts

Planar Meanderline Ferrite-Dielectric Phase Shifter

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This paper presents the design of meanderline circuits with multilayer ferrite-dielectric embedding. New expressions are developed for the even- and the odd-mode admittances for an infinite meanderline in such a structure. It is shown that the effective dielectric constants and the effective relative permeabilities for some of the multilayer structures are simply related. An efficient synthesis routine for the design of meanderline circuits is described. Effect of different parameters on the phase shift has been studied experimentally. It is indicated that the present structure can result in a compact phase shifter with an improved figure of merit, peak power-handling capability, and temperature stability.

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