Abstracts

Analysis of Twin Ferrite Toroidal Phase Shifter in Grooved Waveguide

W. Junding, Y.-Z. Xiong, M.-J. Shi, G.-F. Chen and M.-D. Yu. "Analysis of Twin Ferrite Toroidal Phase Shifter in Grooved Waveguide." 1994 Transactions on Microwave Theory and Techniques 42.4 (Apr. 1994, Part I [T-MTT]): 616-621.

In this paper, the transcendental equations for twin ferrite toroidal grooved waveguide shifters are given. With typical parameters, the differential phase shift, the insertion loss and the sizes of the lambda g/4 impedance transformer are calculated. The results show that the figure of merit and the differential phase shift of the phase shifter are larger than those of rectangular waveguide phase shifter under the same condition. To prove the equations given in the paper, phase shift are measured by experiments. The results are basically in agreement with those calculated by given equations.

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