Abstracts

A Rigorous Method for Computation of Ferrite Toroidal Phase Shifters

Y. Xu and G. Zhang. "A Rigorous Method for Computation of Ferrite Toroidal Phase Shifters." 1988 Transactions on Microwave Theory and Techniques 36.6 (Jun. 1988 [T-MTT]): 929-933.

In this paper, coupled wave theory is used to compute ferrite toroidal phase shifters. Computation results show that this method is very effective, rather simple, and easy to handle. As an example, a computation is carried out to analyze the twin toroidal model, which can be readily produced with considerably larger phase shift than the commonly used single toroidal model. Experimental results are in good agreement with theoretical analysis. Our research work shows that coupled wave theory is a powerful method for treating electromagnetic problems of waveguides loaded with magnetized ferrites.

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