Abstracts

Diplexer Operation of Stripline Y Circulators: Part 1--Basic Performance of Diplexer Operation

T. Nagao and Z. Tanaka. "Diplexer Operation of Stripline Y Circulators: Part 1--Basic Performance of Diplexer Operation." 1980 Transactions on Microwave Theory and Techniques 28.7 (Jul. 1980 [T-MTT]): 776-786.

The diplexer operation as another version of the double circulation frequency operation (DCFO) was recently performed with stripline Y-junction loaded with conductor-ferrite (CF) composites. Experimental results demonstrated that the large insertion losses appeared in association with higher order circulations. This paper treats circulation adjustments for basic performance of the diplexer operation. Theoretical analysis presents a criterion upon which to test circulation adjustments in getting an idea DCFO performance in the instances of the diplexer operation. Better combinations of circulating modes for the diplexer operation, and relevant circulation adjustments are discussed. It is concluded that the main cause to the large insertion losses insufficiency in circulation adjustments. Experimental results are also presented. In this paper, phenomenological explanation of various circulations is given in preparation for subsequent treatment of the diplexer operation. All ferrites used are treated above resonance.

❑ Return to main document.