

Coplanar Waveguide and Slot Line on Magnetic Substrates: Analysis and Experiment

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A full-wave analysis is presented for coplanar waveguide and slot line phase shifters on magnetic substrates. The analysis is based on a Green's function which is formulated using a transmission matrix approach. Different configurations are investigated with respect to their nonreciprocal phase shift properties. Measurements are presented for a coplanar waveguide etched on the surface of a rectangular ferrite toroid. Calculated and measured results are in good agreement.

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