Abstracts

Nonreciprocal Remanence Ferrite Phase Shifters Using the Grooved Waveguide

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For the purpose of improving the performance charasteristics of the nonreciprocal remanence ferrite phase shifter, a new configuration with a grooved waveguide is proposed and analyzed. Some results calculated as functions of dielectric and ferrite thickness, waveguide dimensions, and frequency are shown and compared as being in good agreement with experiments at the X band. The figure of merit (differential phase shift per insertion loss) and the handling power of the proposed phase shifter are discussed in comparison with those of the conventional waveguide geometry.

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