Abstracts

Longitudinally Magnetized Ferrite Phase Shifters Using a Reduced Height Rectangular Waveguide

B.C.S. Lint and A. Priou. "Longitudinally Magnetized Ferrite Phase Shifters Using a Reduced Height Rectangular Waveguide." 1977 MTT-S International Microwave Symposium Digest 77.1 (1977 [MWSYM]): 523-525.

A new reciprocal ferrite phase-shifter in 4 millimeter wavelength is described. This electronically controlled phaser uses a reduced height rectangular waveguide and the ferrite material is longitudinally magnetized. A theoretical approach of the problem from the coupled-mode formalism is elaborated. The first performances of a 90° phaser element at 70 GHz are obtained with 1.5 db maximum insertion loss and a VSWR < 1.5. That corresponds to a figure of merit equal to 60 deg/db. The measured characteristics of the phaser show good agreement with computational values.

❑ Return to main document.