

Abstracts

Further Developments in Dielectric Waveguide Devices for Millimeter Wavelengths

C.E. Barnes. "Further Developments in Dielectric Waveguide Devices for Millimeter Wavelengths." 1962 PGMTT National Symposium Program and Digest 62.1 (1962 [MWSYM]): 107-111.

An isolator and a variable attenuator having flat responses over the 50 to 60 Gc/s band were reported at the 1961 PGMTT Symposium. These devices utilized a broadband Faraday rotator which consisted of a solid rod of ferrite of sufficient diameter to function as a dielectric waveguide with characteristics approximating those of an infinite ferrite. Further development of this type of device has produced isolators with significant improvements in bandwidth and loss characteristics and a three-port circulator with broadband characteristics similar to the isolator. The characteristics of the isolator as functions of power and temperature have been studied in order to determine the limitations on the isolator's use.

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