Abstracts

Loss Measurements of the Beam Waveguide

J.B. Beyer and E.H. Scheibe. "Loss Measurements of the Beam Waveguide." 1963 Transactions on Microwave Theory and Techniques 11.1 (Jan. 1963 [T-MTT]): 18-22.

The diffraction loss of a new low-loss waveguide for millimeter and shorter wavelength, called the beam waveguide, was measured. The loss measurements were made using a resonator technique. The beam waveguide resonator derived from the beam waveguide consists of confocal paraboloids and is itself a very useful millimeter and sub-millimeter wave circuit component having already found application in some optical masers. Measurements made to determine the reflection loss of the resonator end plates also resulted in information on the loss of 90° bends in the beam waveguide. The results of the loss measurements made on the beam waveguide, in the frequency range near 9 Gc, are in good agreement with theoretical values given by Goubau.

❑ Return to main document.