Abstracts

An Accurate Millimeter Wave Loss and Delay Measurement Set (Nov. 1962 [T-MTT])

M.B. Chasek. "An Accurate Millimeter Wave Loss and Delay Measurement Set (Nov. 1962 [T-MTT])." 1962 Transactions on Microwave Theory and Techniques 10.6 (Nov. 1962 [T-MTT]): 521-527.

A millimeter wave loss and delay measurement set has been built which combines large dynamic range with high accuracy. Up to 80-db loss and 100-nsec envelope delay can be measured in the 50-60-Gc range. The accuracy for 0-40-db loss measurements is ±0.05 db while beyond that accuracy is progressively diminished to ±0.9 db at 80 db. Delay accuracy for low-loss devices (0-20 db) is ±0.2 nsec. The measurement method employs rapid comparison switching, heterodyne detection, precision IF loss and delay standards. The method, the test set and some new microwave components are described. Sources of measurement error are discussed and some typical measurements are included.

❑ Return to main document.