Abstracts

A sampled-line reflectometer for submillimeter-wave measurements

S. Ulker and R.M. Weikle, II. "A sampled-line reflectometer for submillimeter-wave measurements." 2002 MTT-S International Microwave Symposium Digest 02.3 (2002 Vol. III [MWSYM]): 1677-1680 vol.3.

A reflectometer designed for operation at submillimeter wavelengths and based on the sampled-transmission line architecture is described. The reflectometer is a relatively simple implementation of the six-port network analyzer introduced by Engen (IEEE Trans. Microwave Theory Tech., vol. MTT-25, no. 12, pp. 1080-1083, 1979) and consists of a section of rectangular waveguide and an ensemble of Schottky diode power detectors. Design considerations for the instrument are described and measurements in the 270 GHz to 285 GHz range are presented and discussed.

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