

Abstracts

Quasi-Optical, Surface-Wave Guide, and Other Components for the 100 to 300 kmc Region

F. Sobel and J.C. Wiltse. "Quasi-Optical, Surface-Wave Guide, and Other Components for the 100 to 300 kmc Region." 1961 PGMTT National Symposium Digest 61.1 (1961 [MWSYM]): 1-2.

Analytical and experimental studies were carried out to assess the value of various components and techniques in the frequency range from 100 to 300 kmc. The basic instrumentation consisted of adaptations of conventional rectangular waveguide devices, and signal power was provided by crystal harmonic generators driven with a few tens of milliwatts at a fundamental frequency of either 35 or 70 kmc. When silicon crystals are employed with video detection, output signal levels have a dynamic range of about 45 db above noise at 105, 140, and 210 kmc and somewhat less at 280 kmc. In an effort to obtain improvement, experiments are underway with gallium arsenide and other crystals.

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