

## Photoconductor-Based 10-110-GHz On-Chip Device Characterization Technique

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C. Rauscher. "Photoconductor-Based 10-110-GHz On-Chip Device Characterization Technique." 1990 MTT-S International Microwave Symposium Digest 90.1 (1990 Vol. 1 [MWSYM]): 607-610.

Integration of reflectometer circuitry and device under test on the same semiconductor chip provides an attractive means for measuring scattering parameters at very high frequencies and over wide, uninterrupted frequency ranges. The investigated approach utilizes high-speed photoconductive circuit elements to perform sampling and incident pulse generation functions, assisted by special pulse shaping and compensation networks. Five test structures, implemented in monolithic format on a GaAs chip, experimentally demonstrate the practicability of the approach for frequencies up through W-band.

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