

A Time-Domain Network Analyzer Which Uses Optoelectronic Techniques

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The performance of characterization measurements using time domain optoelectronic techniques offers many advantages and is especially suited for the on-wafer probing of GaAs integrated circuits. A single measurement can provide broadband scattering parameters. Signal generation is achieved by the illumination of a biased picosecond photoconductor with a short optical pulse and sampling by either a photoconductive or electro-optic technique. A comparison of results using both optical sampling techniques and frequency domain measurements is made.

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