Abstracts

Picosecond Optoelectronic Measurement of S Parameters and Optical Response of an AlGaAs/GaAs HBT (Short Papers)

M. Matloubian, H. Fetterman, M. Kim, A. Oki, J. Camou, S. Moss and D. Smith. "Picosecond Optoelectronic Measurement of S Parameters and Optical Response of an AlGaAs/GaAs HBT (Short Papers)." 1990 Transactions on Microwave Theory and Techniques 38.5 (May 1990 [T-MTT] (Special Issue on Applications of Lightwave Technology to Microwave Devices, Circuits, and Systems)): 683-686.

The S parameters of an AIGaAs/GaAs heterojunction bipolar transistor (HBT) were measured using a picosecond optoelectronic system. The measured S parameters show qualitatively good agreement with those obtained using a conventional vector network analyzer. The optical response of the HBT was also measured using this system by directly illuminating the base-collector region. Used as a phototransistor, the HBT showed pulse widths with FWHM as short as 15 ps.

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