Abstracts

Wide-Band Millimeter Wave Characterization of Sub-0.2 Micrometer Gate-Length AlInAs/GaInAs HEMT's

M. Matloubian, S.E. Rosenbaum, H.R. Fetterman and P.T. Greiling. "Wide-Band Millimeter Wave Characterization of Sub-0.2 Micrometer Gate-Length AlInAs/GaInAs HEMT's." 1991 Microwave and Guided Wave Letters 1.2 (Feb. 1991 [MGWL]): 32-34.

The S parameters of an AlInAs/GaInAs high electron mobility transistor (HEMT) were measured using a picosecond optoelectronic system over a bandwidth of 100 GHz. These picosecond optoelectronic measurements were validated by comparing low frequency measurements to those obtained using on wafer RF probes/vector network analyzer, and W-band results to measurements done using a waweguide-to-microstrip transition/vector network analyzer frequency extender. This is the widest bandwidth of measured S parameters reported on a single transistor.

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