Abstracts

Two-Port S-Parameter Characterization of High Electron Mobility Transistors at Millimeter Wave and Microwave Frequencies

J.H. Schaffner, F.K. Oshita, H.R. Fetterman, J.J. Berenz, K. Nakano and H.C. Yen. "Two-Port S-Parameter Characterization of High Electron Mobility Transistors at Millimeter Wave and Microwave Frequencies." 1988 MTT-S International Microwave Symposium Digest 88.1 (1988 Vol. I [MWSYM]): 233-236.

Although millimeter wave amplifiers and oscillators using high electron mobility transistors (HEMTs) have been reported up to 94 GHz, to date no direct characterization of these devices has been reported. This paper presents the two-port S-parameters of sub-micron gate length HEMTs at W-band (75 to 110 GHz) using a specially constructed six-port network analyzer. In addition, for comparison to the millimeter wave measurements, the HEMTs were characterized at microwave frequencies, at room and cryogenic temperatures.

❑ Return to main document.