Abstracts

Broadband HEMT and GaAs FET Amplifiers for 18 - 26.5 GHz

K. Shibata, B. Abe, H. Kawasaki, S. Hori and K. Kamei. "Broadband HEMT and GaAs FET Amplifiers for 18 - 26.5 GHz." 1985 MTT-S International Microwave Symposium Digest 85.1 (1985 [MWSYM]): 547-550.

Two types of broadband amplifiers operating over 18 to 26.5 GHz have been developed by using newly developed 0.4-µm gate HEMTs and conventional 0.25-µm gate GaAs FETs. The four-stage EEMT amplifier exhibits a noise figure of <= 7.2 d.B and a gain of 19.3 ± 1.8 dB and the five-stage GaAs FET amplifier exhibits a noise figure of <= 12 dB and a gain of 22.7 ± 2.2 dB over 18 to 26.5 GHz. The minimum noise figures in the measured frequency ranqe are 5.0 dB and 7.5 dB for the HEMT and GaAs FET amplifiers, respectively. No essential difference is found between the amplifiers in input/output VSWR, output power and temperature variation of noise figure and gain.

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