Abstracts

Performance of GaAs MESFET's at Low Temperatures (Short Papers)

C.A. Liechti and R.B. Larrick. "Performance of GaAs MESFET's at Low Temperatures (Short Papers)." 1976 Transactions on Microwave Theory and Techniques 24.6 (Jun. 1976 [T-MTT] (Special Issue on Microwave Field-Effect Transistors)): 376-381.

The noise- and s-parameters of a GaAs MESFET with 1-mu m gate Iength are characterized versus temperature. At room temperature, the noise figure measured at 12 GHz is 3.5 dB. At 90 K, the noise figure decreases to 0.8 dB (T/sub e/ = 60 K). The associated gain is 8 dB. The design of a cooled amplifier for the 11.7-12.2-GHz communication band is discussed. At 60 K, the three-stage amplifier exhibits 1.6-dB noise figure (T/sub e/ = 130 K) and 31-dB gain.

❑ Return to main document.