MESFETs Come of Age

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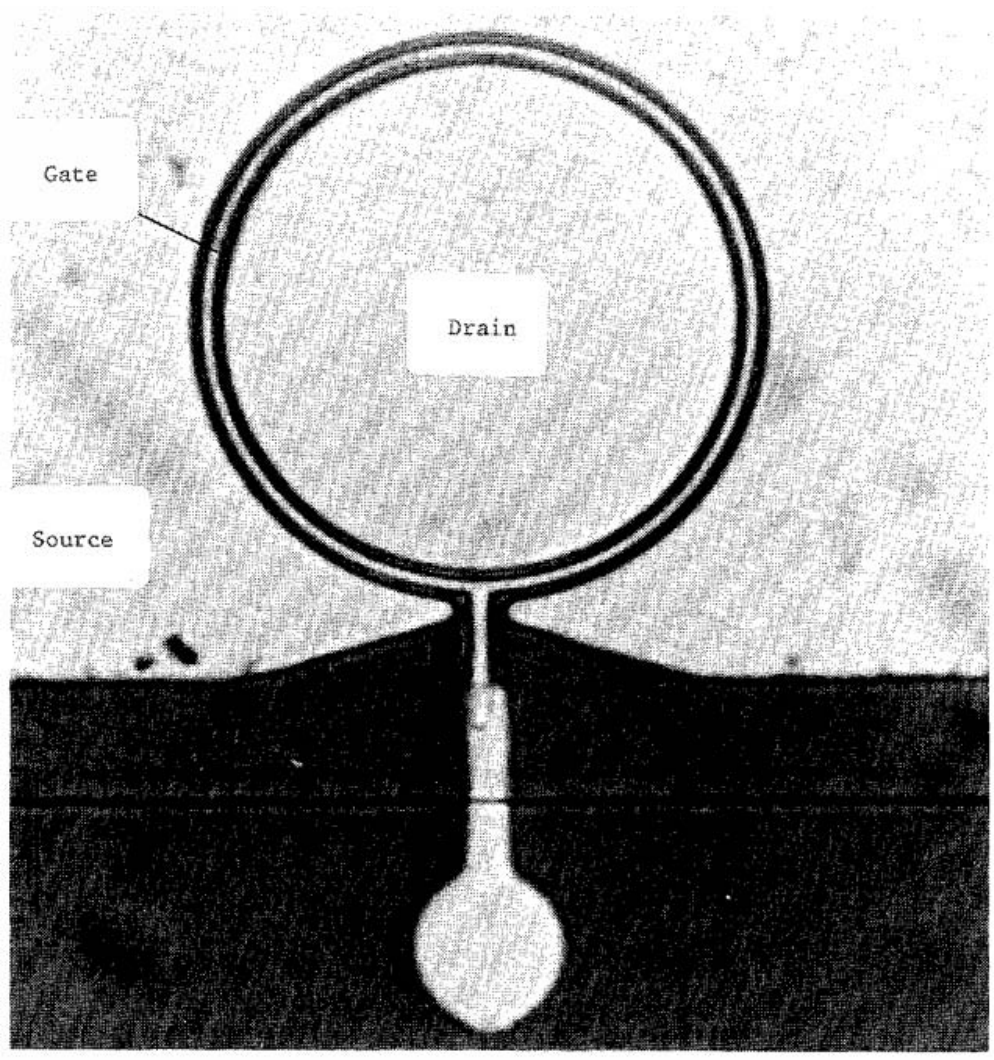

X- and Ku-Band Amplifiers with GaAs Schottky-Barrier FETS

THE SUPERIOR MOBILITY of electrons in GaAs was appreciated early on, but material and fabrication difficulties delayed the appearance of practical devices for years after proofs-of-concept demonstrations. This paper from 1972 describes a MESFET with characteristics good enough to build credible amplifiers in the vicinity of 10GHz. One amplifier exhibits a noise figure of 3.8dB at 8GHz, and another possesses an 8.0dB NF at 10GHz (increasing to 10.7dB at 13GHz). These encouraging results led to the dominance of MESFET technology in LNAs and power amplifiers for years afterward.

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