Abstracts

20 GHz-Band Low-Noise HEMT Amplifier

K. Shibata, K. Nakayama, M. Ohtsubo, H. Kawasaki, S. Hori and K. Kamei. "20 GHz-Band Low-Noise HEMT Amplifier." 1986 MTT-S International Microwave Symposium Digest 86.1 (1986 [MWSYM]): 75-78.

A 20 GHz-band low-noise amplifier has been developed by using newly developed 0.25-µm gate HEMTs. The amplifier has been fabricated by cascading six single-ended unit amplifiers without any isolators at the interstages. The HEMT amplifier exhibits a noise temperature of 170 K (NF = 2.0 dB) and a gain of 47 dB over 17.5 to 19.5 GHz in an uncooled operation. Noise temperatures of 130 K (NF = 1.6 dB) and 110 K (NF = 1.4 dB) have been obtained at -20°C and -50°C, respectively.

❑ Return to main document.

Click on title for a complete paper.