

Abstracts

K-Band High-Power GaAs FET Amplifiers

J. Sone and Y. Takayama. "K-Band High-Power GaAs FET Amplifiers." 1981 Transactions on Microwave Theory and Techniques 29.4 (Apr. 1981 [T-MTT]): 309-313.

Lumped-element internal matching techniques were successfully adopted for K-band power GaAs FET amplifiers. The developed 18-GHz band two-stage amplifier provides 1.05-W power output at 1-dB gain compression and 1.26-W saturated power output with 8.1-dB small-signal gain. The 20-GHz band single-stage amplifier has 1.04-W power output with 3-dB associated gain. Lumped-element internal matching circuit design as well as amplifier fabrication are described. Intermodulation distortion and AM-to-PM conversion characteristics are also presented.

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