Abstracts

A High-Power, C-Band Multiple IMPATT Diode Amplifier

R.E. Lee, D. Parker and U. Gysel. "A High-Power, C-Band Multiple IMPATT Diode Amplifier." 1973 G-MTT International Microwave Symposium Digest of Technical Papers 73.1 (1973 [MWSYM]): 163-165.

The design and performance of a high-power, reflection type microwave amplifier is described. The amplifier utilizes four individually matched silicon IMPATT diodes and a hybrid-circuit power-combiner scheme to achieve a CW output of 8 watts at 5.23 GHz with 6-dB gain and a power added efficiency of over 5 percent. FM and AM noise performance of the IMPATT amplifier is compared to that of a medium power klystron. The design of the hybrid-circuit power combiner is outlined and test results obtained on the four-way combiner are presented.

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