

Abstracts

A 44 GHz HEMT Doubler/Amplifier Chain

P.D. Chow, Y. Hwang, D. Garske, J. Velebir and H.C. Yen. "A 44 GHz HEMT Doubler/Amplifier Chain." 1990 MTT-S International Microwave Symposium Digest 90.1 (1990 Vol. I [MWSYM]): 603-606.

A 44 GHz doubler was designed and fabricated using $100 \times 0.15 \mu\text{m}$ InGaAs HEMT and MIC circuit. The doubler shows a minimum conversion loss of 1.4 dB with 0.4 dBm output power, and 1.6 dBm maximum output power with 3.4 dB conversion loss. A 44 GHz InGaAs HEMT doubler/amplifier chain was also fabricated, demonstrating 10 dBm power, 7 dB overall gain, and 2 GHz bandwidth at the output frequency.

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