Abstracts

500 MHz, 100 W X-Band Solid State Amplifier

R. Mallavarpu and G. MacMaster. "500 MHz, 100 W X-Band Solid State Amplifier." 1985 MTT-S International Microwave Symposium Digest 85.1 (1985 [MWSYM]): 387-390.

This paper describes advances made in developing a wideband, high power solid state amplifier at X-band. Presently a bandwidth of 500 MHz with peak power levels of 100 W at 30% duty have been obtained by combining only four GaAs IMPATT diodes in a spatial field type of power combiner/amplifier. Key features of this device are its high combining efficiency (~ 95%), a high degree of isolation (>30 dB) between elemental amplifier modules and a 10 dB stable dynamic range.

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