

Abstracts

A Compact Microstrip High-Power High-Efficiency Avalanche-Diode Oscillator (Correspondence)

S.-G. Liu. "A Compact Microstrip High-Power High-Efficiency Avalanche-Diode Oscillator (Correspondence)." 1970 *Transactions on Microwave Theory and Techniques* 18.11 (Nov. 1970 [T-MTT] (Special Issue on Microwave Circuit Aspects of Avalanche-Diode and Transferred Electron Devices)): 982-983.

This paper describes a simple compact L-band microstrip oscillator circuit using avalanche diodes operating in the high-efficiency mode. The circuit has produced 150 watts with 26-percent efficiency; the duty cycle is 1 percent at the 100-watt power level. The overall size of the circuit is reducible to 1 by 2 inches using metal-on-alumina microstrip. Frequency tuning between 1.62 GHz and 1.83 GHz with less than 1.2-dB variation in power output has been demonstrated.

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