

Abstracts

X-Band Distributed Array Gunn Effect Transmitter

M.S. Stringfellow, G. Bednar, F.J. Rosenbaum and K.L. Horn. "X-Band Distributed Array Gunn Effect Transmitter." 1969 G-MTT International Microwave Symposium Digest of Technical Papers 69.1 (1969 [MWSYM]): 196-202.

This paper describes the use of injection phase locked Gunn effect oscillators as module transmitters for distributed phased array applications. These devices are capable of direct dc to microwave conversion with reasonable efficiencies and useful power levels. However, certain problem areas must be investigated before they can be successfully employed. These areas include peak and average power output, sensitivity of output power and frequency to the microwave circuit and bias voltage, phase control, reproducibility and cost, driver requirements, and temperature and frequency stability.

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