

Abstracts

A Periodic Spatial Power Combining MESFET Oscillator (Short Papers)

A. Balasubramaniyan, J. Heinbockel, A. Mortazawi and T. Itoh. "A Periodic Spatial Power Combining MESFET Oscillator (Short Papers)." 1995 Transactions on Microwave Theory and Techniques 43.5 (May 1995 [T-MTT]): 1196-1197.

A planar periodic MESFET based spatial power combiner was designed and fabricated for X-band operation. In this combiner four MESFET devices driving a linear microstrip antenna array are periodically connected to a microstrip transmission line. A large-signal analysis of this combiner and experimental results thereon are presented. An effective radiated power of 484 mW was achieved for this structure at an oscillation frequency of 10.02 GHz with a power combining efficiency of 87%.

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