

Abstracts

High-efficiency Ku-band oscillators

J.O. McSpadden, Lu Fan and Kai Chang. "High-efficiency Ku-band oscillators." 1998 Transactions on Microwave Theory and Techniques 46.10 (Oct. 1998, Part II [T-MTT] (Special Issue on New Developments in the Design of Microwave and Millimeter-Wave Oscillators)): 1566-1571.

Ku-band oscillators have been experimentally found to have a high dc-to-radio-frequency (RF) efficiency. Using a packaged pseudomorphic high electron-mobility transistor (pHEMT) device, a maximum efficiency of 60% was measured at 14.5 and 15 GHz with output powers of 16 and 23 mW, respectively. Oscillator circuits also revealed efficiencies of 48% at 16 GHz and 41% at 17.1 GHz with RF output power levels of 11 and 13 mW, respectively.

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