Abstracts

V-Band Low-Noise Integrated Circuit Receiver

K. Chang, K. Louie, A.J. Grote, R.S. Tahim, M.J. Mlinar, G.M. Hayashibara and C. Sun. "V-Band Low-Noise Integrated Circuit Receiver." 1983 Transactions on Microwave Theory and Techniques 31.2 (Feb. 1983 [T-MTT] (Special Issue on Millimeter-Waves)): 146-154.

A compact low-noise V-band integrated circuit receiver has been developed for space communication systems, The receiver accepts an RF input of 60-63 GHz and generates an IF output of 3-6 GHz. A Gunn oscillator at 57 GHz is phaselocked to a low-frequency reference source to achieve high stability and low FM noise. The receiver has an overall single sideband noise figure of less than 10.5 dB and an RF to IF gain of 40 dB over a 3-GHz RF bandwidth. All RF circuits are fabricated in integrated circuits on a Duroid substrate.

❑ Return to main document.