Abstracts

Monolithic Ka-band even-harmonic quadrature resistive mixer for direct conversion receivers

K.S. Ang, M. Chongcheawchamnan, D. Kpogla, P.R. Young, I.D. Robertson, Dong-sik Kim, Moon-chuel Ju and Hwa-Chang Seo. "Monolithic Ka-band even-harmonic quadrature resistive mixer for direct conversion receivers." 2001 Radio Frequency Integrated Circuits (RFIC) Symposium 01. (2001 [RFIC]): 169-172.

This paper describes the design and measured performance of a Ka-band even-harmonic quadrature mixer which employs PHEMT resistive mixer elements. By employing the even-harmonic technique, with local oscillator at half the RF input frequency, the mixer is better suited for direct conversion receiver application. The chip operates In the 30 to 40 GHz range and has been used to successfully demodulate a 4 Mb/s 16-QAM signal at 38 GHz.

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