Abstracts

High Performance Resistive EHF Mixers Using InGaAs HEMTs

K.W. Chang, T.H. Chen, S.B.T. Bui, L.C.T. Liu and L. Nguyen. "High Performance Resistive EHF Mixers Using InGaAs HEMTs." 1992 MTT-S International Microwave Symposium Digest 92.3 (1992 Vol. III [MWSYM]): 1409-1412.

This paper presents the design, fabrication, and testing of a hybrid and a monolithic single-balanced EHF mixers. Very low mixer intermodulation distortion was achieved using 0.2x160 μm² pseudomorphic InGaAs high electron mobility transistor biased in the resistive mode. Both mixers show similar excellent measured performance. Mixer conversion loss over the 26-29 GHz RF frequency band is about 7~9 dB for DC to 2 GHz IF frequencies. With an LO power of +13 dBm, the measured input two-tone third-order intercept point is higher than +24 dBm.

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