Abstracts

23-40 GHz InP HEMT MMIC Distributed Mixer (1992 Vol. II [MWSYM])

R. Majidi-Ahy, C. Nishimoto, J. Russell, W. Ou, S. Bandy and G. Zdasiuk. "23-40 GHz InP HEMT MMIC Distributed Mixer (1992 Vol. II [MWSYM])." 1992 MTT-S International Microwave Symposium Digest 92.2 (1992 Vol. II [MWSYM]): 1063-1066.

We report the development of an active millimeter-wave InP HEMT MMIC distributed mixer operating over 23-40 GHz RF bandwidth, with IF frequencies in the range of 2-13 GHz, and fixed LO frequencies of 20 and 28 GHz. The devices were InGaAs-InAlAs-InP HEMT's with a gatelength of 0.25µm. The mixer had an average conversion gain of 0 dB when biased for maximum bandwidth, and an average conversion gain of 5 dB when biased for maximum gain. The overall chip dimensions for this MMIC, were 500 by 1000 µm.

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