Abstracts

An even harmonic mixer using self-biased anti-parallel diode pair

M. Shimozawa, T. Katsura, K. Maeda, E. Taniguchi, T. Ikushima, N. Suematsu, K. Itoh, Y. Isota and T. Takagi. "An even harmonic mixer using self-biased anti-parallel diode pair." 2002 MTT-S International Microwave Symposium Digest 02.1 (2002 Vol. I [MWSYM]): 253-256 vol.1.

This paper presents a novel even harmonic mixer using self-biased anti-parallel diode pair (APDP). Resistors for self-bias are employed in APDP, and voltage differences in D.C. arise at each diode when LO power is applied. As increasing of LO power, voltage differences become larger, so maximum voltages of LO wave added to each diode are almost constant and conversion loss of the mixer is kept constantly. In the developed L-band even harmonic mixer using self-biased APDP for a direct conversion receiver, fluctuation of voltage conversion gain is below 1 dB with LO power of from 0 dBm to 14 dBm.

❑ Return to main document.