

Abstracts

4-GHz Integrated-Circuit Mixer

*M. Katoh and Y. Akaiwa. "4-GHz Integrated-Circuit Mixer." 1971 *Transactions on Microwave Theory and Techniques* 19.7 (Jul. 1971 [T-MTT] (Special Issue on Microwave Integrated Circuits)): 634-637.*

We have calculated the conversion loss for microwave diode mixers taking into account the effects of series resistance and barrier capacitance in the diode and the internal resistance of the local oscillator. The relations between the conversion loss and the parameters, which are important for the design of the diode mixer, are clarified. A 4-GHz integrated-circuit low-noise mixer is developed. The minimum overall noise figure obtained is 4.1 dB with a short-circuited image-frequency termination.

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