Abstracts

An 8-15 GHz GaAs Monolithic Frequency Converter (Dec. 1987 [T-MTT])

R. Ramachandran, S.B. Moghe, G. Lizama, P. Ho and A.F. Podell. "An 8-15 GHz GaAs Monolithic Frequency Converter (Dec. 1987 [T-MTT])." 1987 Transactions on Microwave Theory and Techniques 35.12 (Dec. 1987 [T-MTT] (1987 Symposium Issue)): 1471-1476.

An MMIC frequency converter with an RF bandwidth of 8-15 GHz and an IF bandwidth of 1.5 GHz has been designed and built. The MMIC chip has 15 dB conversion gain and includes a two-stage RF amplifier, a two-stage LO buffer amplifier, a double-balanced mixer, and a three-stage IF amplifier. This high level of integral ion is realized on a small--48 x 96 mil--area, resulting in good RF yields. The circuit employs a push-pull configuration to eliminate the need for via holes (low-inductance grounds) and facilitate a compact layout.

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