Abstracts

A GaAs Single Balanced Mixer MMIC with Built-In Active Balun for Personal Communication Systems

H. Koizumi, S. Nagata, K. Tateoka, K. Kanazawa and D. Ueda. "A GaAs Single Balanced Mixer MMIC with Built-In Active Balun for Personal Communication Systems." 1995 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 95.1 (1995 [MCS]): 77-80.

A GaAs single balanced mixer IC with built-in active baluns for IF and LO inputs has been developed. The present mixer achieved the conversion gain of 16dB and the LO signal suppression over 30dBc at the LO input power of OdBm. Owing to a novel BST (Barium Strontium Titanate) capacitor technology, the implemented mixer IC was packaged in the small 6pin outline with the extremely small chip size of 0.6 x 0.65mm^2. The IC can eliminate the LO filter of the up-conversion system for a variety of handyphone-sets in L-band.

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