Abstracts

A Highly Compact, Wideband GaAs MESFET X - Ku Band Receiver MMIC

M.V. Aust, T.N. Ton, J. Yonaki, G.S. Dow, T.S. Lin, D.C. Yang and S.S. Andrews. "A Highly Compact, Wideband GaAs MESFET X - Ku Band Receiver MMIC." 1991 MTT-S International Microwave Symposium Digest 91.2 (1991 Vol. II [MWSYM]): 529-532.

A fully integrated MMIC receiver was designed and fabricated using the ion-implanted GaAs MESFET 0.5 µm process. This MMIC receiver incorporates a two-stage RF amplifier, a two-stage LO amplifier, an IF amplifier and a singly balanced diode mixer to form this highly compact monolithic IC receiver. Better than 10 dB conversion gain is achieved from 9 to 20 GHz. The LO to IF isolation is better than 30 dB. This chip operates from a single + 5 Vdc and draws 175 mA. Total chip size is 3.5 mm x 3.0 mm.

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