

Abstracts

A Highly Compact, Wideband GaAs HEMT X - Ku Band Image-Reject Receiver MMIC (1993 [MCS])

R. Katz, M.V. Aust, R. Kasody, H. Wang, B. Allen, G.S. Dow, K. Tan, S. Lin and R. Myers. "A Highly Compact, Wideband GaAs HEMT X - Ku Band Image-Reject Receiver MMIC (1993 [MCS])." 1993 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 93.1 (1993 [MCS]): 131-134.

A fully integrated MMIC receiver was designed and fabricated using the 0.2 μ m pseudomorphic InGaAs/GaAs HEMT process technology. This MMIC receiver incorporates a single-stage RF amplifier, a two-staged balanced LO amplifier, a single-stage IF amplifier, an IF switch and an image-reject diode mixer. Results from these receiver chips showed good conversion gain and image rejection in a single small chip over multi-octave frequencies. This chip operates from a single +5 Vdc and draws 280 mA. Total chip size is 5.5mm x 4.5mm.

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