Abstracts

GaAs MMIC Slotline/CPW Quadrature IF Upconverter

G.K. Lewis, I.J. Bahl, A.E. Geissberger and E.R. Schineller. "GaAs MMIC Slotline/CPW Quadrature IF Upconverter." 1988 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 88.1 (1988 [MCS]): 51-54.

A unique GaAs monolithic Slotline/Coplanar Waveguide (SL/CPW) quadrature IF upconverter IC has been developed. The IC is a single-sideband suppressed carrier upconverter and consists of LO and RF power splitters, two IF/RF diplexers, and two SL/CPW single balanced mixers. The IC is unique because it has circuitry on both sides of the chip which required a few additional processing steps to fabricate. With a 7.0 GHz LO, and a 1 MHz to 1000 MHz quadrature IF input signal, the typical upconverter performance was 40dB LO port to RF port isolation, 25 dB carrier suppression, 20 dB sideband suppression, and 14 dB conversion loss in the 6-8 GHz RF output band.

❑ Return to main document.