Abstracts

A low-cost W-band MIC mixer using flip-chip technology

R.S. Virk, S.A. Maas, M.G. Case, M. Matloubian, P. Lawyer, H.C. Sun, C. Ngo and D.B. Rensch. "A low-cost W-band MIC mixer using flip-chip technology." 1997 Microwave and Guided Wave Letters 7.9 (Sep. 1997 [MGWL]): 294-296.

The authors describe a novel mixer fabricated using a unique low-cost approach to achieve effective conversion performance. By utilizing flip-chip GaAs Schottky diodes mounted on a duroid substrate, this radio frequency (RF) probable mixer achieves 11.3-dB conversion loss at 77 GHz with an IF frequency of 500 MHz. This new technology demonstrates an affordable alternative to standard millimeter-wave circuit fabrication while offering the capability to integrate a variety of device technologies in the same circuit.

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