Abstracts

W-Band Low Noise Integrated Circuit Crossbar and Finline Mixers with Over 20 GHz Instantaneous RF Bandwidth

R.S. Tahim, T. Pham and K. Chang. "W-Band Low Noise Integrated Circuit Crossbar and Finline Mixers with Over 20 GHz Instantaneous RF Bandwidth." 1983 MTT-S International Microwave Symposium Digest 83.1 (1983 [MWSYM]): 290-292.

W-band integrated circuit mixers with state-of-the-art performance over wide IF and RF bandwidths have been developed. A conversion loss of less than 7.2 dB over 20 GHz instantaneous RF bandwidth has been achieved in a crossbar stripline structure and less than 7.6 dB over 28 GHz in a finline structure. Commercially available beamlead diodes are used in both structures. Major features include mechanical ruggedness, light weight, small size, and ease of low cost manufacturing. Areas of application include advanced electronic warfare, surveillance, and communication systems.

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