Abstracts

An Integrated Millimeterwave BCB Patch Antenna HEMT Receiver

U. Dahlgren, J. Svedin, H. Johansson, O.-J. Hagel, H. Zirath, C. Karlsson and N. Rorsman. "An Integrated Millimeterwave BCB Patch Antenna HEMT Receiver." 1994 MTT-S International Microwave Symposium Digest 94.2 (1994 Vol. II [MWSYM]): 661-664.

A new integrated rnillimeterwave patch antenna HEMT receiver for imaging applications is presented. The mixer element is a HEMT working in a resistive mode. We use a relatively thick layer of BenzoCyclo-Buthene* (BCB) as dielectric support for the antenna element, and to realize microstrip based circuits. At an RF of 35 GHz we obtain a minimum conversion loss of 8 dB, defined as the IF power dissipated in a 50 Omega load divided by the available power from the patch antenna.

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