Abstracts

Airborne Imaging System Using a Cryogenic 90-GHz Receiver

B. Vowinkel, J.K. Peltonen, W. Reinert, K. Gruner and B. Aumiller. "Airborne Imaging System Using a Cryogenic 90-GHz Receiver." 1981 Transactions on Microwave Theory and Techniques 29.6 (Jun. 1981, Part I [T-MTT]): 535-541.

A cryogenic 90-GHz receiver has heen developed with a noise figure of 2.36 dB ((double sideband) (DSB)) and an instantaneous band-width of 1.2 GHz. The cooled front-end consists of a Schottky-barrier mixer followed by a GaAs FET IF amplifier. The radiometer is small in size and weighs only 52 kg, including the refrigerator system. It is part of an airborne imaging system, that has been fight-tested aboard a Dornier Do 28 aircraft. First test results are presented.

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