Abstracts

A Millimeter-Wave Monolithic Load Switching Twist Reflector for Compact Imaging Cameras

G.R. Huguenin, E.L. Moore, S. Bandla and J.J. Nicholson. "A Millimeter-Wave Monolithic Load Switching Twist Reflector for Compact Imaging Cameras." 1996 Transactions on Microwave Theory and Techniques 44.12 (Dec. 1996, Part II [T-MTT] (1996 Symposium Issue)): 2751-2757.

A monolithic load switching twist reflector (LSTR) has been built and tested for use in 94 GHz passive imaging cameras. In this paper, we describe the LSTR component, which switches between the dual roles of load comparison in a radiometer and reducing the length of the camera. Radiometric and quasioptical tests show that the array has an insertion loss of 0.25 dB and a switching ratio of >=20 dB. This active array of p-i-n diodes can replace the mechanical choppers often used in load comparison.

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