Abstracts

A Quasi-Optical Polarization-Duplexed Balanced Mixer for Millimeter-Wave Applications

K.D. Stephan, N. Camilleri and T. Itoh. "A Quasi-Optical Polarization-Duplexed Balanced Mixer for Millimeter-Wave Applications." 1983 Transactions on Microwave Theory and Techniques 31.2 (Feb. 1983 [T-MTT] (Special Issue on Millimeter-Waves)): 164-170.

An integrated planar antenna-mixer structure for use at millimeterwave frequencies is described. A simple but accurate theory of the slot-ring antenna is applied to several experimental devices. Mixer conversion loss of about 6.5 dB was obtained from an X-band model. Measured radiation patterns of structures designed for 65 GHz agree reasonably well with theory.

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