Abstracts

Quasi-Optical Planar FET Transceiver Modules

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We present the design and performance of quasi-optical planar transceiver modules suitable for communication and Doppler radar. The designs incorporate microstrip antennas which function as resonant loads for FET oscillators. The FETs operate as oscillators and self-oscillating mixers for down-conversion of the received signal. The circuits are simple and inexpensive, and are suitable for incorporation as elements of an active transceiver array. X-band prototype circuits are reported and their use for Doppler motion detection is demonstrated.

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