Abstracts

An integrated Doppler-radar transceiver front end using two FET active antennas

Zhengping Ding and Kai Chang. "An integrated Doppler-radar transceiver front end using two FET active antennas." 1998 Transactions on Microwave Theory and Techniques 46.7 (Jul. 1998 [T-MTT]): 1001-1003.

An integrated X-band Doppler-radar transceiver front end has been developed. This front end consists of two adjacently spaced field-effect transistor (FET) active antennas, with one of them being biased to oscillate as its transmitter and the other being biased not to oscillate, but to act as its mixer. This design has the advantage of lower noise at low Doppler frequencies as compared to a self-oscillating mixer scheme. The circuit can be used in low-power Doppler-radar systems to detect slow-moving objects such as pedestrians, intruders, automobiles, etc., with high sensitivity.

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