Abstracts

Sensitivity of Doppler Radar with Sell-Detecting Diode Oscillators

T. Nygren and A. Sjolund. "Sensitivity of Doppler Radar with Sell-Detecting Diode Oscillators." 1974 Transactions on Microwave Theory and Techniques 22.5 (May 1974 [T-MTT]): 494-498.

The behavior of Doppler radar with self-detecting diode oscillators is described. Conditions for the frequency deviation to contain only the first harmonic of the Doppler shift frequency are given. The conversion gain and the signal-to-noise (S/N) ratio including both intrinsic LF and RF noise are calculated. An equivalent LF circuit is obtained. The shape of the I-V characteristic of the oscillating diode is shown to be important for the design of a Doppler module.

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