

Abstracts

A Collision Avoidance Radar Using Six-Port Phase/Frequency Discriminator (SPFD)

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A novel technique is proposed for collision avoidance radar used in automobiles, in which a new six-port microwave/millimeter wave digital phase/frequency discriminator (SPFD) is used to measure Doppler frequency shifts. Both relative speed and moving direction of the target are readily obtained. Ranging is implemented by the measurement of phase difference at two adjacent frequencies. Preliminary experimental simulation proves the validity of the proposed alternative approach.

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