Abstracts

A Low Cost 77 GHz Monolithic Transmitter for Automotive Collision Avoidance Systems

L. Raffaelli, E. Stewart, R. Quimby, J. Borelli, A. Geissberger and D. Palmieri. "A Low Cost 77 GHz Monolithic Transmitter for Automotive Collision Avoidance Systems." 1993 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 93.1 (1993 [MCS]): 63-66.

The design, integration and test results of a 77 GHz GaAs monolithic transmitter specifically optimized for low cost, large volume automotive collision avoidance systems is presented. Greater than +15 dBm of output power has been achieved at the output waveguide interface across a 1 GHz bandwidth using monolithic chips exclusively. This module, due to its small size, light weight and low production cost is a significant advance in MMW technology from traditional waveguide hybrid approaches and it now makes collision avoidance radars affordable.

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