

Abstracts

A V-Band Communication Transmitter and Receiver System Using Dielectric Waveguide Integrated Circuits

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A V-band communication transmitter and receiver is described. Both units make extensive use of passive microwave components fabricated using millimeter-wave insular line integrated circuits (MILIC's). These components consist of rectangular dielectric rod antennas, a MILIC ferrite isolator, a bandpass ring filter, a directional coupler, and sections of dielectric insular waveguide. The passive insular waveguide components are integrated together, along with split block metal waveguide mounts for the active devices, in order to form the RF circuitry of the transmitter and receiver.

[Return to main document.](#)