# Abstracts

## Characterization of Resonant Tunneling Diodes for Microwave and Millimeter-Wave Detection (Short Papers)

*I. Mehdi, J.R. East and G.I. Haddad. "Characterization of Resonant Tunneling Diodes for Microwave and Millimeter-Wave Detection (Short Papers)." 1991 Transactions on Microwave Theory and Techniques 39.11 (Nov. 1991 [T-MTT]): 1876-1880.*

The purpose of this short paper is to report on the direct detection capabilities of resonant tunneling diodes in the 10-100 GHz range. An open circuit voltage sensitivity of 1750 mV/mW (in Ka-Band) is measured which is higher than the sensitivity of comparatively biased commercially available solid state detectors. However, the detector properties are a strong function of diode bias and the measured tangential signal sensitivity (-32 dBm at Ka-Band with 1 MHz bandwidth) and the dynamic range (25 dB) of the diode are smaller compared to other solid state detectors.

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