

Abstracts

Microwave Detection Using the Resonant Tunneling Diode

J.M. Gering, T.J. Rudnick and P.D. Coleman. "Microwave Detection Using the Resonant Tunneling Diode." 1988 Transactions on Microwave Theory and Techniques 36.7 (Jul. 1988 [T-MTT]): 1145-1150.

A detailed experimental and theoretical study in the use of a resonant tunneling diode (RTD) as a microwave detector based upon its small-signal equivalent circuit model is presented. It is shown that the rectified current from the diode can be accurately predicted and that the diode can be operated as a reactive microwave detector which absorbs no microwave power. For this detection mode, a matching network which maximizes the applied ac voltage can be used.

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