

Abstracts

A Stability Criterion for Tunnel Diode Amplifier (Correspondence)

I. Hefni and W.C. Barnes. "A Stability Criterion for Tunnel Diode Amplifier (Correspondence)." 1967 Transactions on Microwave Theory and Techniques 15.7 (Jul. 1967 [T-MTT]): 427-429.

A relatively simple stability criterion is proposed for bandpass tunnel diode amplifiers. The results predicted from this criterion agree very closely with the results obtained from the analog computer simulation of an experimental amplifier. The derived criterion is solved to determine the limitation on the diode series inductance as a function of the diode negative resistance, and the results are plotted for a wide range of diode parameters and amplifier gains.

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