

Abstracts

Solid-State Microwave Amplifiers

H. Heffner. "Solid-State Microwave Amplifiers." 1959 Transactions on Microwave Theory and Techniques 7.1 (Jan. 1959 [T-MTT]): 83-91.

The maser and the parametric amplifier form a new class of microwave amplifiers which can exploit the properties of bound electrons in a solid. These amplifiers have several common characteristics, among them being their very low-noise performance. This paper reviews the method of operation of these amplifiers, discusses the performance achieved and achievable by the various versions, and points up some of the difficulties involved in effectively utilizing the extremely low-noise figures obtainable. A bibliography is included in which an attempt has been made to include all published papers on masers and parametric amplifiers.

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