

Abstracts

Solid State Masers as Low Noise Amplifiers

H.E.D. Scovil. "Solid State Masers as Low Noise Amplifiers." 1961 PGMTT National Symposium Digest 61.1 (1961 [MWSYM]): 41-42.

This paper will review the present status of solid state masers as low noise amplifiers. The maser is the most sensitive of existing amplifiers - in fact, its sensitivity is sufficiently close to the theoretical quantum limit that further improvements in sensitivity will be small. Present devices still fall short of the expected performance limit in other respects. In some applications, increased bandwidths are desired. Although fast recovery and freedom from saturation difficulties has been achieved this has still not been obtained simultaneously with large gain bandwidth products. Some remarks will be made with respect to improvements which may be anticipated in these characteristics.

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