

Abstracts

A K-Band Ruby Maser with 500-MHz Bandwidth (Short Paper)

C.R. Moore. "A K-Band Ruby Maser with 500-MHz Bandwidth (Short Paper)." 1980
Transactions on Microwave Theory and Techniques 28.2 (Feb. 1980 [T-MTT]): 149-151.

Engineering improvements to a previously described reflected- wave maser design have resulted in an instantaneous 3-dB band-width of 400 MHz at 19.5 GHz, increasing to 560 MHz at 24 GHz. Nominal gain is 27 to 31dB and gain flatness is ± 2.5 dB over this tuning range. Noise temperature variation across the passband is less than ± 1.5 K and the effective noise temperature referred to the room temperature input flange ranges from 9.5 ± 4 K to 13.5 ± 4 K over the 18.5- to 25-GHz tuning range.

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