

Abstracts

Coherent Transmitter Considerations Utilizing Injection Locked Magnetrons

W.S. Best, R.W. Laton and V.H. Smith. "Coherent Transmitter Considerations Utilizing Injection Locked Magnetrons." 1984 MTT-S International Microwave Symposium Digest 84.1 (1984 [MWSYM]): 356-357.

The Radio Frequency (RF) power generation capability of various Ka-band transmitter alternatives are discussed. The coherent magnetron can be a low cost method of producing Ka-band RF power efficiently. Additive FM noise characteristics of commercially available X-band magnetrons were measured and their power combining capability studied. Finally, noise theory for coherent magnetrons is reviewed and an equation to predict FM noise performance is derived.

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