

Abstracts

Technology Considerations for the Use of Multiple Beam Antenna Systems in Communication Satellites (Dec. 1979 [T-MTT])

E.W. Matthews, C.L. Cuccia and M.D. Rubin. "Technology Considerations for the Use of Multiple Beam Antenna Systems in Communication Satellites (Dec. 1979 [T-MTT])." 1979 Transactions on Microwave Theory and Techniques 27.12 (Dec. 1979 [T-MTT] (1979 Symposium Issue)): 998-1004.

The general usage of multibeam antennas in satellite communication system is reviewed, and design constraints for a six-beam reconfigurable satellite antenna system are considered. These show that losses in the variable beam-forming network (BFN) limit performance achievable with a conventional common-power-amplifier/receiver system. An alternative design for an active BFN is presented, and relative performance predicted at 4/6, 11/14, and 20/30 GHz.

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