Abstracts

A Theoretical and Experimental Comparison of Directly and Externally Modulated Fiber-Optic Links

C.H. Cox, III, L.M. Johnson and G.E. Betts. "A Theoretical and Experimental Comparison of Directly and Externally Modulated Fiber-Optic Links." 1989 MTT-S International Microwave Symposium Digest 89.2 (1989 Vol. II [MWSYM]): 689-692.

Analytic models of directly and externally modulated fiber-optic links have been derived and experimentally confirmed. The models have been employed to optimize the operating parameters of fiber-optic links. Experimental measurements on these optimized links indicated net incremental link power gains of +3 dB for direct modulation and +11 dB for external modulation. The implications of these optimization on other measures of link performance, such as bandwidth and noise figure, are also presented.

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