Abstracts

Low-Loss Analog Fiber-Optic Links

C.H. Cox, III, D.Z. Tsang, L.M. Johnson and G.E. Betts. "Low-Loss Analog Fiber-Optic Links." 1990 MTT-S International Microwave Symposium Digest 90.1 (1990 Vol. I [MWSYM]): 157-160.

Experimental and theoretical studies of high-performance fiber-optic links are reported. For the experimental directly modulated link, the measured electrical insertion gain was -4.9 dB at a bandwidth of 1500 MHz, and 0.3 dB at a bandwidth of 200 MHz. For the experimental externally modulated link operating at a bandwidth of 800 MHz, the calculated electrical insertion gain based on actual device parameters is -1.0 dB, while at 150 MHz a gain of 6.0 dB is expected. Both links have no active amplification. The directly modulated links have higher noise figures because of the high relative intensity noise of the diode laser.

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