Abstracts

Experimental reduction of dispersion-induced effects in microwave/millimeter-wave optical systems employing SOA boosters

F. Ramos, J. Herrera and J. Marti. "Experimental reduction of dispersion-induced effects in microwave/millimeter-wave optical systems employing SOA boosters." 2001 MTT-S International Microwave Symposium Digest 01.1 (2001 Vol. I [MWSYM]): 77-79 vol.1.

A novel approach to reduce the dispersion induced effects in microwave/millimeter-wave optical links based on the combination of chirp generated by semiconductor optical amplifiers (SOA's) and fiber-induced self-phase modulation has been proposed and experimentally demonstrated. The results show that the dispersion-induced RF carrier suppression effect may be alleviated by more than 20 dB when the SOA is operated under saturation. However, the SOA input power must be carefully controlled in order to avoid significant nonlinear distortion.

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