Abstracts

Fiber Optic Microwave Transmission Using Harmonic Modulation and Optoelectronic Mixing/Optically Pumped Mixing (1991 Vol. II [MWSYM])

H. Ogawa and Y. Kamiya. "Fiber Optic Microwave Transmission Using Harmonic Modulation and Optoelectronic Mixing/Optically Pumped Mixing (1991 Vol. II [MWSYM])." 1991 MTT-S International Microwave Symposium Digest 91.2 (1991 Vol. II [MWSYM]): 593-596.

This paper proposes two configurations of fiber optic links for use in microwave and millimeter-wave transmissions. Harmonic generation and the optoelectronic mixing/optically pumped mixing are successfully utilized in the fiber optic links. The performance of laser diodes as a harmonic modulator is experimentally investigated in the 10-GHz band. The pin photodiode is used as an optoelectronic microwave mixer and an optically pumped microwave mixer, and the microwave characteristics of the mixers are demonstrated. The two fiber optic links are promising to transmit microwave and millimeter-wave frequencies.

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