Abstracts

Distortion Characteristics in Directly Modulated Laser Diodes by Microwave Signals

M.L. Majewski and L.A. Coldren. "Distortion Characteristics in Directly Modulated Laser Diodes by Microwave Signals." 1989 MTT-S International Microwave Symposium Digest 89.3 (1989 Vol. III [MWSYM]): 1167-1170.

A simple method for harmonic and intermodulation distortion determination of a laser diode under direct modulation by microwave analog signals is presented and experimentally verified. The method makes use of small-signal perturbation analysis of the rate equations to obtain analytical expressions for laser diode distortion. Experimental verification of the method presented has been done using DFB laser diodes operated at 1.3 and 1.5μm wavelengths with modulation frequencies up to 6 GHz.

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