Abstracts

Method for Extrinsic Characterization of Intrinsic and Components of Semiconductor Laser Diode Circuit Model

M.L. Majewski and D. Novak. "Method for Extrinsic Characterization of Intrinsic and Components of Semiconductor Laser Diode Circuit Model." 1991 Microwave and Guided Wave Letters 1.9 (Sep. 1991 [MGWL]): 246-248.

It is shown that measurements of intensity noise, small-signal modulation response and input reflection coefficients of a semiconductor laser diode can be used to characterize the intrinsic and extrinsic parameters of the laser. These measurements, combined with the analytical expressions presented here enable one to determine the intrinsic 3 dB-modulation bandwidth and the extrinsic parasitic components associated with the laser diode that generally introduce modulation bandwidth limitation.

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