

Abstract

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Distributed Raman amplifier crosstalk effect in different kind of modulation for forward, backward and bidirectional pumping

This paper study the variance crosstalk standard deviation in a closed formula for Self-Phase Modulation (SPM) and CrossPhase Modulation (XPM), which is very important parameters in nonlinear effect phenomena which affect the system performance. The model is used to analysis the best performance with minimum crosstalk in WDM system and the direct effect of increasing the input power signal in the system with respect to the bit rate, pulse shape, modulation formula and the multi-pumping distributed Raman amplifier (forward, backward and bi-directional) pumping.