New Method to Improve The Gain Ripple in Single and Double Stage Double Pass Erbium Doped Fiber Amplifier in Multichannel System

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Abstract

In this paper two configurations single and double stage with double pass technique are used with new flatting technique. The “Optisystem version 13.0” software package is used for simulation process. By using single stage EDFA with double pass technique the gain ripple enhanced from 34.56±2.8 to 35.21±0.43 dB with using flatting technique between the first and second passes, but it has high noise figure 5.98±1.12 dB. The gain in the double stage EDFA with double pass technique is improved from 33.67±3 to 34.60±0.56 dB with using mid stage flatting technique and the noise figure of it is 3.94±0.3 dB.

References


Index Terms
Computer Science Circuits and Systems

Keywords
EDFA, single stage, double stage, double pass, gain flatting, gain ripple