

BIFURCATION ANALYSIS OF THE DYNAMICS  
OF LASERS WITH SELF-MODULATION  
OF A  $Q$ -FACTOR

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S u m m a r y

The bifurcation analysis of the semi-classical model of a single-mode solid-state laser with an inertialess bleachable filter and a quadratically non-linear element has been carried out. The stability criteria of periodic oscillations, the periodic solution in a quadratic approximation, and the analytical expression of a limit cycle in the first approximation have been obtained. The results of calculations of the limit-cycle elements are presented in the tabular and graphic forms.