Investigation of dissipation in a quantum LC circuit

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Abstract
In this article we consider the resistance of a quantum LC circuit as a heat bath. The heat bath can be modeled by a collection of quantum harmonic oscillators with a continuum of frequencies. By using the minimal coupling method between the circuit and the field describing the environment, the process of energy dissipation and probability transitions between the energy levels of the quantum circuit, are obtained.

Keywords: dissipation, LC circuit, minimal coupling, transition probabilities

For the full article refer to the Persian section