

simplejunction

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1 Simple Junction: {Matsubara Formalism}

First we consider tunneling current in the textbok. First, we repeat his derivation following Mahan's Book, in **page 85, page 207 and page 789**. The Hamiltonian of the junction writes as,

$$H = H_R + H_L + H_T = H_0 + H_T$$

with the Hamiltonians for the left side,

$$c_{-\mathbf{k},\downarrow}^\dagger + c_{\mathbf{k},\downarrow} c_{-\mathbf{k},\uparrow})$$

In []: