Phase diagrams and electromagnetic properties of s-wave superconductivity of the extended Hubbard model with the attractive pair-hopping interaction

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We study the ground state properties of the extended Hubbard model with the pair-hopping interaction J, i.e. the Penson-Kolb-Hubbard model, for the case of attractive J ($J > 0$). We examine the system for the case of nearest-neighbors electron hopping. For $d = 2$ (SQ) lattice we present the ground state phase diagrams involving magnetic and s-wave superconducting states and determine the evolution of electromagnetic characteristics of superconducting phase as a function of particle concentration n and interactions. The results are compared with those obtained for the repulsive J ($J < 0$) presented in a separate report on this Conference.

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