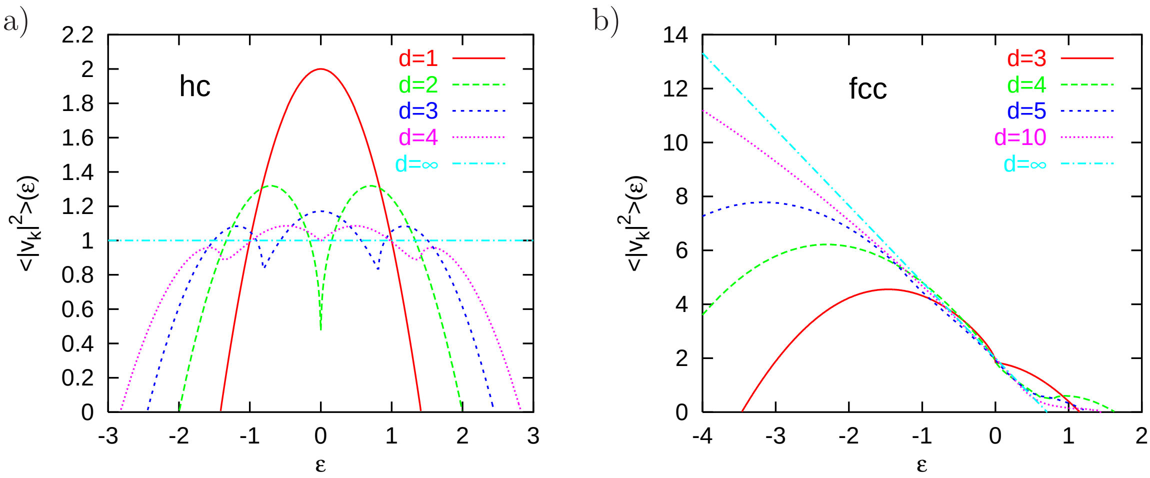

Figure 4.19: DMFT transport characteristics: $\langle |\boldsymbol{v_k}|^2 \rangle(\epsilon) = \tilde{\rho}(\epsilon)/\rho(\epsilon)$ **a)** for the hc lattice and **b)** for the fcc lattice. In the former case, the graph approaches unity for $d \to \infty$; in the latter, the asymptotic form is a straight line which vanishes at the band edge $\epsilon = 1/\sqrt{2}$.

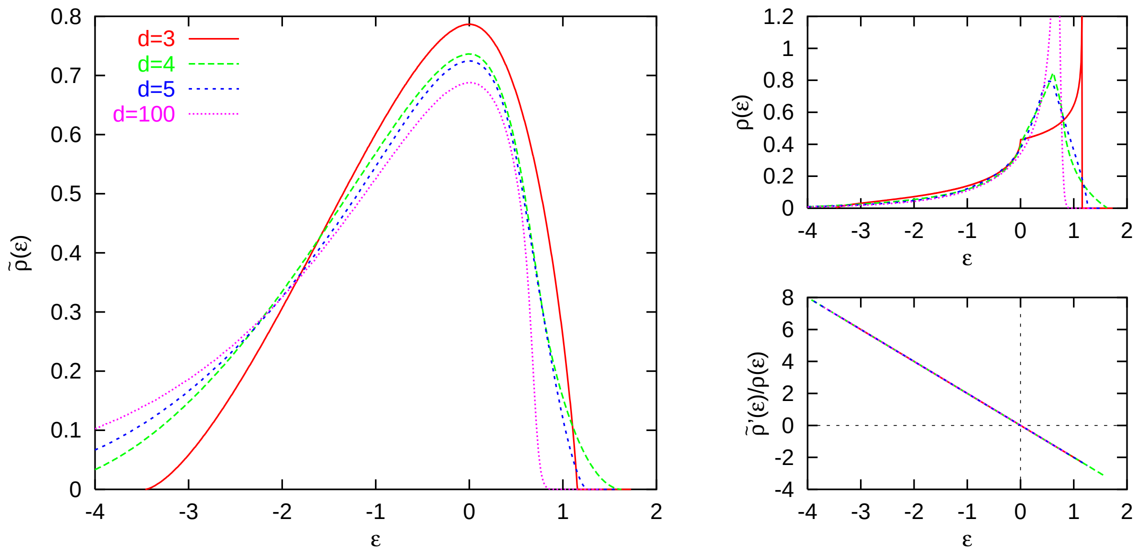

Figure 4.20: DMFT transport characteristics of fcc lattice with NN hopping (cf. Fig. 4.14). As in the hc case, the f-sum is proportional to the kinetic energy; here, $\tilde{\rho}'(\epsilon)/\rho(\epsilon) = -2\epsilon$.

$d \to \infty$. In particular, neither the finite-dimensional nor the limiting forms are constant. This fact which is clearly important for quantitative studies of the influence of frustration on transport properties was overlooked in a recent publication (Merino and McKenzie, 2000) as we will discuss in the next subsection. In Fig. 4.20, the f-sum rule is still seen to be proportional to the kinetic energy, but with an extra factor of 2 compared to the hc case. This proportionality is lost in the simultaneous presence of hopping terms to nearest and next-nearest neighbors as studied in Fig. 4.21. Here,