

**"Phonon Scattering by electrons in doped Semiconductors in Intermediate Concentration Region"\***

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It is shown that the temperature dependence of thermal conductivity of doped semiconductors in the intermediate concentration region of doping can be explained by applying the theory of scattering of phonons by electrons. Using inhomogeneity model, the number of electrons in bound and conduction band region is calculated. The values of deformation potential and the density-of-states effective mass, both determined from our work, will be compared with experimental values. The effect of scattering of phonons by the defects, system's boundary, electrons, and impurities will be included in the current calculations.

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