Resistivity crossover in the power-law Kondo systems KAZUTO NODA, TOMONORI SHIRAKAWA, RIKEN CEMS, SEIJI YUNOKI, RIKEN CEMS, RIKEN, RIKEN AICS — We calculate temperature-dependent resistivity of Kondo systems with divergent structure of the density of states around the Fermi energy, which is given by $\rho(\omega) \propto |\omega|^{-p}$ ($0 < p < 1$), via Wilson’s numerical renormalization group method. We clarify that these systems show specific resistivity crossover scaled with Kondo temperature $T_K$. Characteristic power-law divergence of resistivity in the Kondo region ($T \gg T_K$) leads to a novel dependence of the resistivity minimum. We also elucidate that the spectral density at the ground state shows peak structures around $\omega \simeq \pm T_K$ and a dip structure around the Fermi energy, whose structure reflects the resistivity crossover. Our findings might shed light on Kondo effects on a graphene.