Maglev trains based on the so-called *Inductrack* technology move similar to the magnet above a superconductive plane. For a Maglev train the drag force is

$$F_d = F_1 \frac{v_0 v}{v_0^2 + v^2},$$

and the lift force is

$$F_l = F_2 \frac{v^2}{v_0^2 + v^2},$$

where v_0 is the characteristic velocity. The drag force reaches its maximum value $F_d(\max) = F_1/2$ at $v = v_0$ and tends to zero as $1/v^2$ at $v \gg v_0$. The lift force tends to F_2 as v approaches infinity.

The qualitative description of the Maglev drag force is like this. As the dissipation is due to resistivity, it is analogous to viscous friction and gives a linear v term in the numerator. The denominator is actually the characteristic impedance squared Z^2. The resistivity gives a constant term, the inductance gives the term that is proportional to v^2, aka $(\omega L)^2$.

Reference: WoPhO problem "Why Maglev Trains Levitate" (2011.2).