Tidal Energy Power

$$P = 1/2\ mV^2 = 1/2\ (\rho AV)V^2 = 1/2\ \rho AV^3$$

P : Energy (Kinetic Energy)
m : Mass of Water [Mass of water (Kg m^{-3}) which passes Cross Sectional Area A (m^2) per unit time (s)] (Kg m^{-3})
ρ: Water Density (Kg/ m^3)
A: Cross Sectional Area
V: Current Speed (Stream Velocity) (ms^{-1})

Present study obtained the tidal current energy map in Kyushu-Okinawa Region. Calculations in the present study were all performed on supercomputers (Hakozaki, Hayakawa and Tatara: see http://www2.cc Kyushu-u.ac.jp/scp/) at Kyushu University

Source: Professor Kyozuka