✳ prefactor of the real-space Keldysh potential

vacuum permittivity $[F\,m^{-1}]$

elementary charge $[C]$

$$\frac{\pi e^2}{[(4\pi\varepsilon_0)\varepsilon_r]\,2r_0}$$

screening length $[m]$

Gaussian units: set to one

relative permittivity of the surrounding medium
(set to one for a monolayer in vacuum)

dimensional analysis:

$$\frac{C^2}{F\,m^{-1}\cdot m} = \frac{C^2}{F} = \frac{C^2}{C^2/J} = J \quad (\text{joules, energy})$$