$$G(\epsilon_{\pm}) \sim \ (\epsilon_-^2 - \epsilon_+^2) \int_0^\infty \frac{dt}{t} \ \frac{-2\cos\left(2\epsilon_+ t\right)}{\sin\left(\epsilon_- - \epsilon_+\right)t \ \sin\left(\epsilon_- + \epsilon_+\right)t} \ e^{-\mu t}, \quad \mu = a_2 - \bar{U}a_1$$