$$i(t) = \frac{\sqrt{2}\,U}{R}\left\{[\cos\varphi\,\sin(\omega t + \upsilon_Z - \varphi) - \varepsilon] + [\varepsilon - \cos\varphi\,\sin(\upsilon_Z - \varphi)]\,e^{-\frac{\omega t}{\tan\varphi}}\right\}$$