$$C(y_c) \simeq -\frac{U_1'(y_c)v_1(y_c)}{\pi k[\mathrm{sgn}(c_i U_1'(y_c))C_{\mathrm{II}r}(y_c) - iC_{\mathrm{II}i}(y_c)]} \cdot \frac{1}{(c - c_c(y_c))}$$