$$\begin{aligned}\rho_\delta(Q^2) =& r_0 + r_1 a_1(Q) + (r_2 - \beta_0 r_1 \delta_1) a_2(Q)^2 \\ &+ [r_3 - \beta_1 r_1 \delta_1 - 2\beta_0 r_2 \delta_2 + \beta_0^2 r_1 \delta_1^2] a_3(Q)^3 \\ &+ [r_4 - \beta_2 r_1 \delta_1 - 2\beta_1 r_2 \delta_2 - 3\beta_0 r_3 \delta_3 + 3\beta_0^2 r_2 \delta_2^2 \\ &- \beta_0^3 r_1 \delta_1^3 + \frac{5}{2} \beta_1 \beta_0 r_1 \delta_1^2] a(Q)^4 + \mathcal{O}(a^5) \qquad (20)\end{aligned}$$