

$$2^{d_{k,j}}=\frac{4}{\varepsilon_4a^k}2^{-j}\pi^{\textcolor{blue}{j}-2k}D_j^{(k)}F_{3k-2j}\leq \frac{\textcolor{blue}{4}A(\sigma)}{\varepsilon_4}\frac{\Gamma(k+1/2)^{1/2}}{(B_1a\sqrt{\pi})^k}, 36mu0\leq j\leq 3k/2.$$