

$$2^{d_{k,j}} = \frac{4}{\varepsilon_4 a^k} 2^{-j} \pi^{j-2k} D_j^{(k)} F_{3k-2j} \leq \frac{4A(\sigma)}{\varepsilon_4} \frac{\Gamma(k+1/2)^{1/2}}{(B_1 a \sqrt{\pi})^k}, \quad 0 \leq j \leq 3k/2.$$