See Keong Lee*, School of Mathematical Sciences, Universiti Sains Malaysia, 11800 USM, Penang, Malaysia. The starlikeness of a generalized Bessel function.

The generalized Bessel function

$$a_{b,p,c}(z) := \sum_{k=0}^{\infty} \frac{(-c)^k}{k! \Gamma(ak + p + \frac{b+1}{2})} \left( \frac{z}{2} \right)^{2k+p},$$

where $z \in \mathbb{D} := \{ z : |z| < 1 \}$, $a \in \mathbb{N} = \{1, 2, 3, \ldots \}$ and $b, p, c \in \mathbb{R}$, satisfied an $a+1$-order differential equation. The function $a_{b,p,c}$ does not belong to the class $\mathcal{A}$ consisting of analytic functions $f$ in $\mathbb{D}$ with normalization $f(0) = 0 = f'(0) - 1$. In this work, the starlikeness of normalized function related to $a_{b,p,c}$ are investigated. (Received August 24, 2019)