$$H_{2,1}^{2,3}\left(\cdot \,\middle|\, \begin{matrix} (1,\frac{1}{\alpha}),(\mathrm{Ceil}(\beta),\beta) \\ (\frac{1}{2},\frac{\alpha}{2}),(1,1),(1,\frac{\alpha}{2}) \end{matrix}\right)$$

Summary

$$\begin{aligned}
a^* &= \frac{1}{\alpha} - \beta + 1 \\
\Delta &= \alpha - \frac{1}{\alpha} - \beta + 1 \\
\delta &= 2^{-\alpha}\left(\frac{1}{\alpha}\right)^{-1/\alpha}\left(2^{\alpha/2}\alpha^{\alpha/2} + \alpha^{\alpha}\right)\beta^{-\beta} \\
\mu &= 1 - \mathrm{Ceil}(\beta) \\
a_1^* &= \frac{1}{2}(\alpha - 2\beta + 2) \\
a_2^* &= \frac{1}{\alpha} - \frac{\alpha}{2} \\
\xi &= \frac{3}{2} - \mathrm{Ceil}(\beta) \\
c^* &= \frac{1}{2}
\end{aligned}$$