

x, y are from original data file

scale factor

a := 23

pole

p := 2

zero

z := 0.2

Given

$$y = \overrightarrow{\left| a \cdot \frac{(j \cdot x + z)}{j \cdot x \cdot (j \cdot x + p)} \right|}$$

$$\begin{pmatrix} a \\ p \\ z \end{pmatrix} := \text{Minerr}(a, p, z)$$

$$\begin{pmatrix} a \\ p \\ z \end{pmatrix} = \begin{pmatrix} 24.576 \\ 2.029 \\ 0.196 \end{pmatrix}$$

approximation:

$$y2 := \overrightarrow{\left| a \cdot \frac{(j \cdot x + z)}{j \cdot x \cdot (j \cdot x + p)} \right|}$$

$$y2 = \overrightarrow{\left| a \cdot \frac{(x - jz)}{x \cdot (x - jp)} \right|}$$

equiv form with real x, complex pole and zero

$$\text{err} := \overrightarrow{|y - y2|}$$

