



$$\tilde{H}(z) = \prod_{j=0}^{\infty} \left[1 + \left(\frac{\alpha}{z} \right)^{2^j} \right]$$

(2.13) property of the scaling function. The Fourier transform of the scaling function is defined as

*N*_Q^{out} in (3.6) are such that the conditions in (2.4) and (2.5)

$$E_4(z) \approx 2.9 \times 10^{-31} - 5.4 \times 10^{-16} \left(z^{64} + \frac{1}{z^{64}} \right). \quad (3.14)$$

FIG. 2. Compactly supported approximation of Butterworth scaling function $\tilde{\psi} = \tilde{\psi}$ obtained by FIR approximation to QMRS. The support is wider than shown in the picture.

