

W16HOGTRIBLOLOS

The object is a periodic structure. The FT of the object is multiplied by a blocking function for high frequencies.

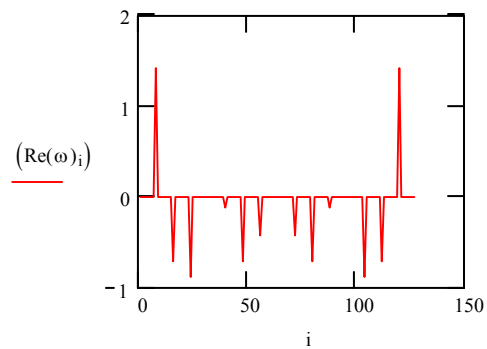
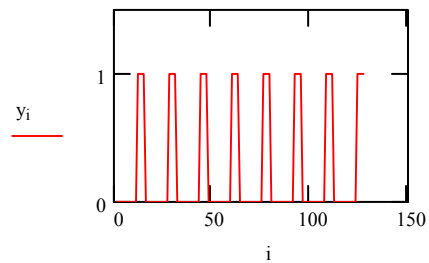
The FT(inverse) of (FT of object)*(Blocking Function) is the " new" image.
The "new" image is compared to the original, that is the FT of (FT of object)
The blocking function removes certain high frequencies of the FT.

Object: Sum of step functions $i := 1, 2, \dots, 127$ $b := 2$ $q := 7$

$$y_i := \sum_{n=0}^{qq} [\Phi[i - [4 \cdot (2 \cdot n + 1) + 2] \cdot b] - \Phi[i - [4 \cdot (2 \cdot n + 1) + 4] \cdot b]]$$

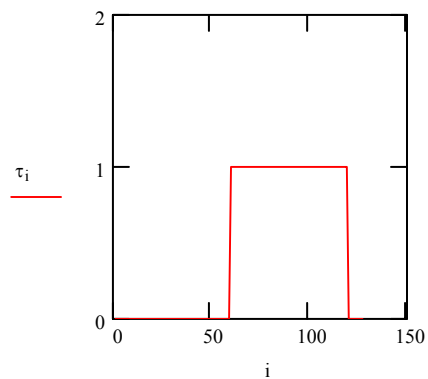
FT of the object y is ω

$$\omega := \text{cfft}(y) \quad N := \text{last}(\omega) \quad N = 127$$



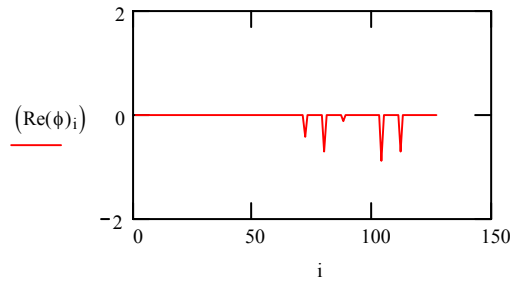
Blocking function y $n := 1$ $a := 15$

$$\tau_i := [\Phi[i - (2 \cdot n + 2) \cdot a] - \Phi[i - (4 + 4 \cdot n) \cdot a]]$$



Product of FT of object and blocking function is the modified FT: ϕ

$$\phi_i := \omega_i \cdot \tau_i$$

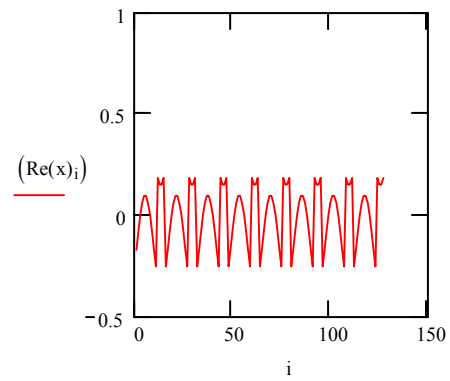


FT (inverse) of the modified FT

$$x := \text{icfft}(\phi)$$

$$N2 := \text{last}(x) \quad N2 = 127$$

$$k := 0..N2$$



For comparison: FT (inverse) of the unmodified FT

$$x := \text{icfft}(\omega)$$

$$N2 := \text{last}(\omega)$$

$$k := 0..N2 \quad N2 = 127$$

