

W17HOGRPERS

A blocking function has been chosen blocking certain frequencies such that there are twice as many peaks in the image.

The object is a periodic structure. The FT of the object is multiplied by a blocking function. A blocking function has been chosen blocking certain frequencies such that there are twice as many peaks in the image.

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.

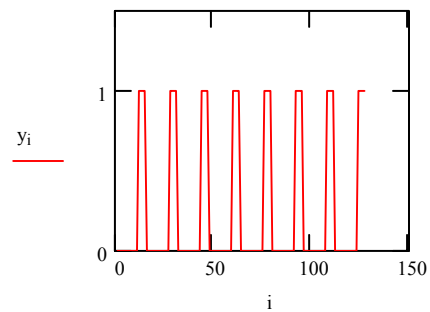
**Object**

$i := 1, 2, \dots, 127$

$b := 2$

$qq := 7$

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

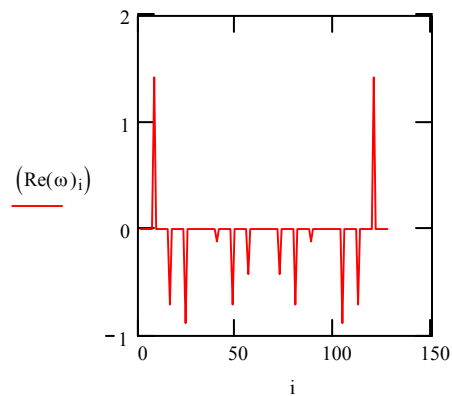


**FT of Object**

$\omega := \text{cfft}(y)$

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

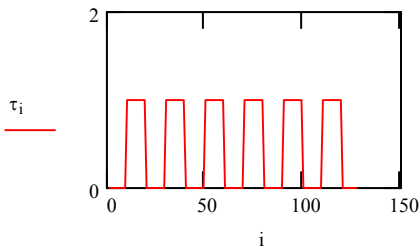
$N = 127$



**Blocking Function**

$$\tau_i := \sum_{n=0}^q \left[ \Phi[i - (4 \cdot n + 2) \cdot a] - \Phi[i - (4 \cdot n + 4) \cdot a] \right]$$

$$q \equiv 5 \qquad a \equiv 5$$

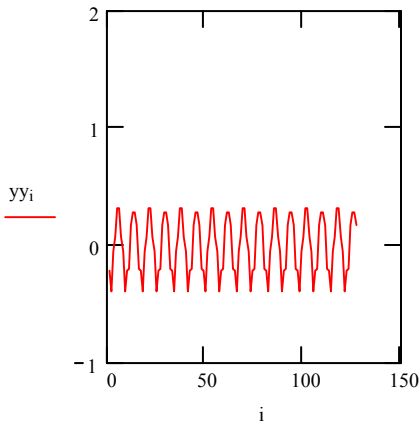


**Product: FT (inverse) of object and Blocking Function**

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

$$yy := \text{icfft}(\phi) \qquad N2 := \text{last}(\phi)$$

$$k := 0..N2$$



**For comparison: Original Object**

