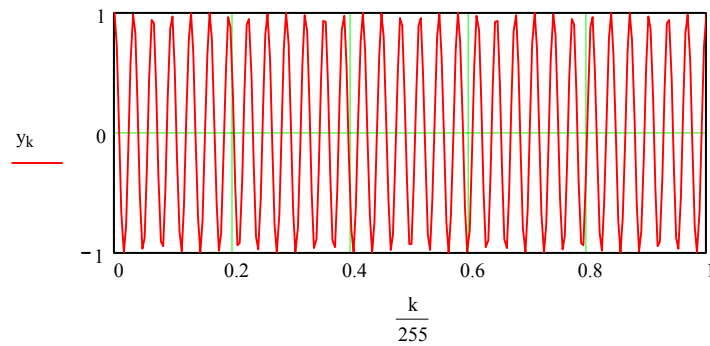


F16APODIS Fourier transformation of sine-function and Appodisation.

1.Original function

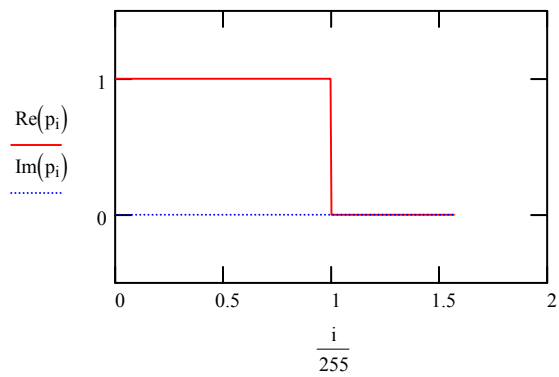
$$k := 0..255 \qquad y_k := \left(\cos \left(2 \cdot \pi \cdot f \cdot \frac{k}{255} \right) \right) \qquad f \equiv 31$$



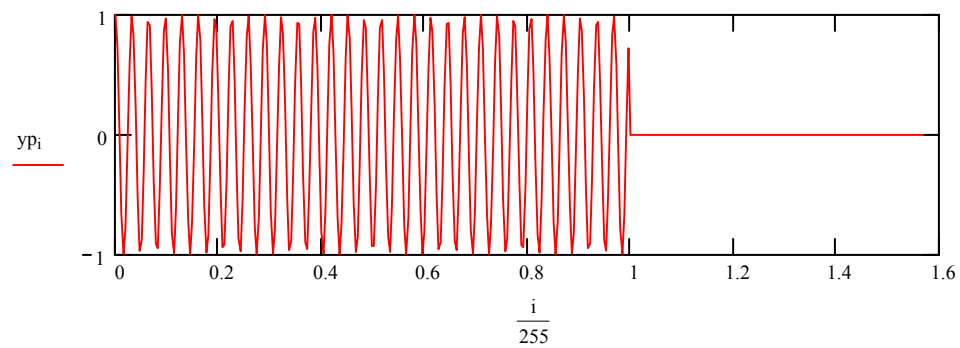
2.Step function

$$i := 0..400$$

$$p_i := \left[\Phi(i) - \Phi[i - (d)] \right] \qquad d \equiv 255$$



$$yp_i := \left(\cos \left(2 \cdot \pi \cdot f \cdot \frac{i}{255} \right) \right) \cdot p_i$$



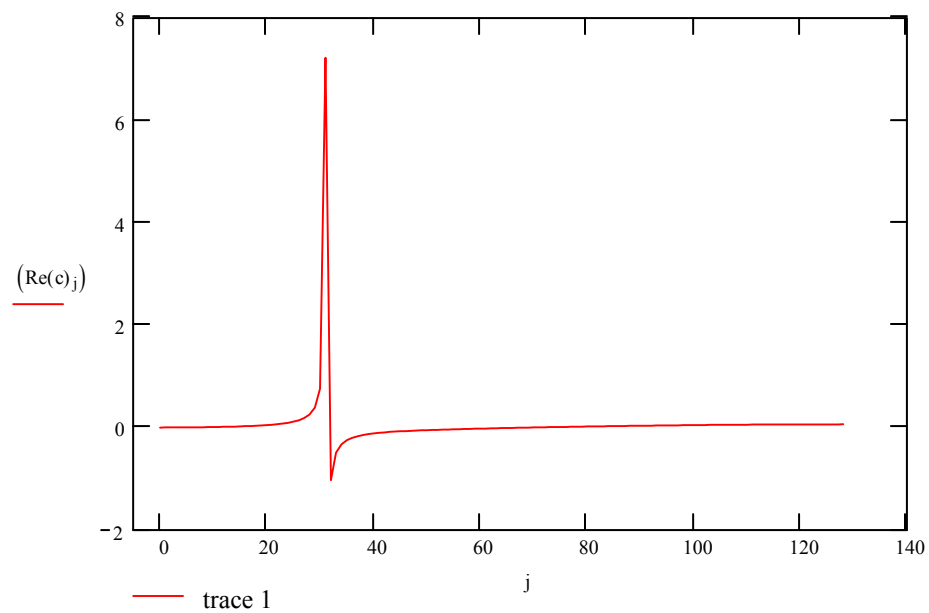
3. Fourier transformation of y times p, we have to use 255 points

$$x_k := \left(\cos \left(2 \cdot \pi \cdot f \cdot \frac{k}{255} \right) \right) \cdot [\Phi(k) - \Phi[k - (d)]] \quad k := 0..255$$

$c := \text{fft}(x)$

$N := \text{last } N = 128$

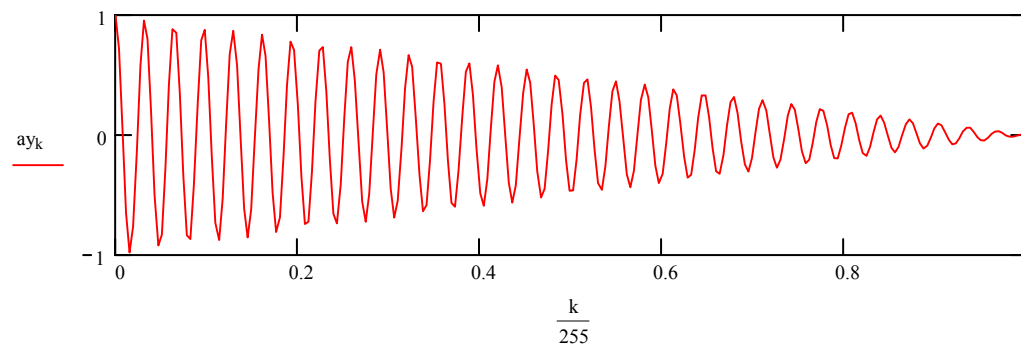
$j := 0..N$



4. Triangle function

$$q_k := 1 - \frac{k}{255}$$

$ay_k := q_k \cdot y_k$



5. Fourier transformation of y times p , we have to use 255 points

```
N = 128  
j := 0..N  
c := fft(ay)  
N := last(c)
```

