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[6]:

$$f(t) = \sum_{n=0}^{\infty} \alpha^n \cos(\beta^n t) \tag{1}$$

$\alpha > 1, \beta > 1, \alpha\beta > 1 + 3\pi/2$ $f(t)$

[6].

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$\alpha > \beta$.

[7]:

$$s(t) = \cos\left(\pi \frac{\Delta f t^2}{\tau_i}\right), \quad t \leq \left|\frac{\tau_i}{2}\right|, \tag{2}$$

Δf ; τ_i ;

[2 - 5],

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$$u(t) = \sum_{n=0}^{N-1} \alpha^n \cos\left(\pi \frac{\Delta f \beta^n t^2}{\tau_i}\right) \cdot \sum_{n=0}^{N-1} \alpha^{-n}, t \leq \left|\frac{\tau_i}{2}\right|, \tag{3}$$

N ; n ;

; α ; β ;

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$$\sum_{n=0}^{N-1} \alpha^{-n}$$

$$\beta=1 \quad N=1 \quad \alpha \quad (3)$$

$$G(f) = \int_{-0,5\tau_i}^{0,5\tau_i} u(t) \exp(-j2\pi ft) dt \quad (4)$$

$$\text{FrenelC}(x) = \int_0^x \cos\left(\frac{\pi t^2}{2}\right) dt, \quad (5)$$

$$\text{FrenelS}(x) = \int_0^x \sin\left(\frac{\pi t^2}{2}\right) dt$$

$$G(f) = \sum_{n=0}^{N-1} 0,5\alpha^n \beta^{-\frac{n}{2}} \mu_n \times \left(\sum_{n=0}^{N-1} 0,5\alpha^n \beta^{\frac{n}{2}} \Delta f \mu_n \right)^{-1} \times \left(\left\{ \text{FrenelC}(X_1) + \text{FrenelC}(X_2) \right\}^2 + \left\{ \text{FrenelS}(X_1) + \text{FrenelS}(X_2) \right\}^2 \right)^{0,5}, \quad (6)$$

$$X_1 = (\Delta f \beta^n - f) \mu, \quad X_2 = (\Delta f \beta^n + f) \mu, \quad (7)$$

$$\mu_n = \sqrt{\tau_i / 2 \Delta f \beta^n}$$

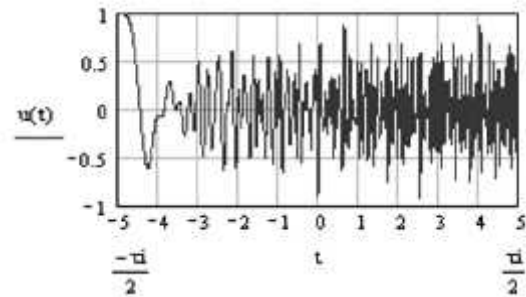
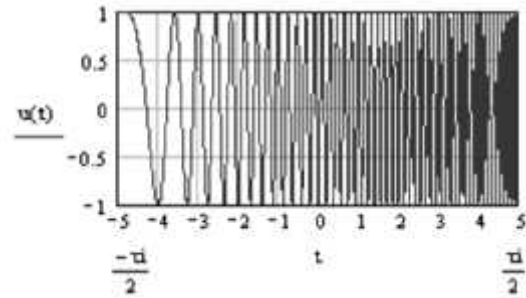
$$\left(\sum_{n=0}^{N-1} 0,5\alpha^n \beta^{\frac{n}{2}} \Delta f \mu_n \right)^{-1}$$

$$\alpha=1, \beta=1,25, \quad N=5, \quad \Delta f=10, \quad \tau_i=10, \quad B = \Delta f \tau_i \gg 1.$$

$\sin x/x$ [5].

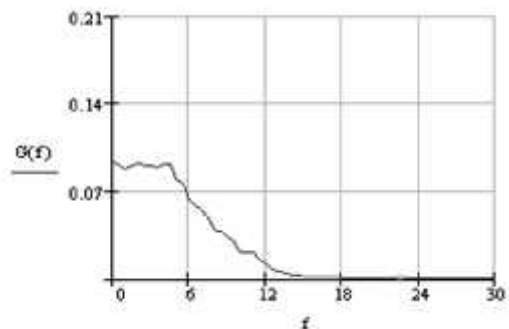
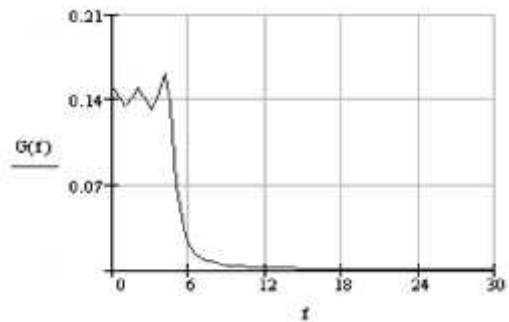
(6).

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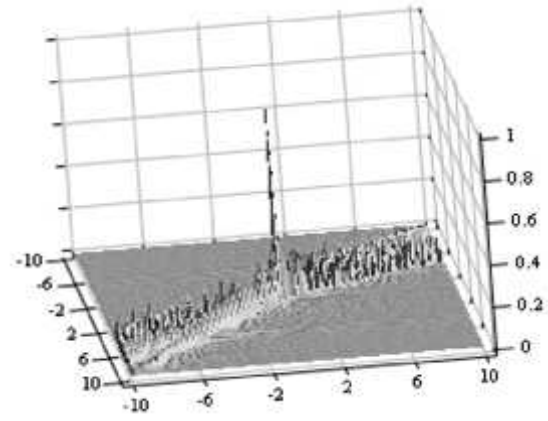
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F [9]:

$$\rho(\tau, F) = \int_{-\infty}^{\infty} u(t) \cdot u^*(t-\tau) \cdot e^{j2\pi Ft} dt \Big/ \int_{-\infty}^{\infty} \{u(t)\}^2 dt .(8)$$

(3) (8)



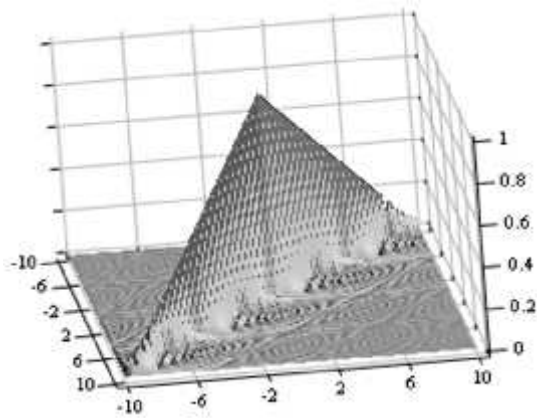
.3. () ()

$$\rho(\tau, F) = \left| \sum_{n=0}^{N-1} \alpha^n \cdot \frac{\sin \left[\pi \left(F + \frac{\tau}{\tau_i} \cdot \Delta f \cdot \beta^n \right) (\tau_i - |\tau|) \right]}{\pi \left(F + \frac{\tau}{\tau_i} \cdot \Delta f \cdot \beta^n \right) \tau_i} \right| \times \sum_{n=0}^{N-1} \alpha^{-n}, \quad |\tau| \leq \tau_i, \quad (9)$$

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(9). .3 () ,

(.3 ()).



(9) $F=0$,

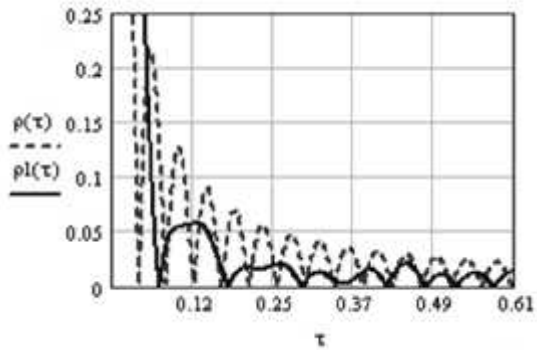
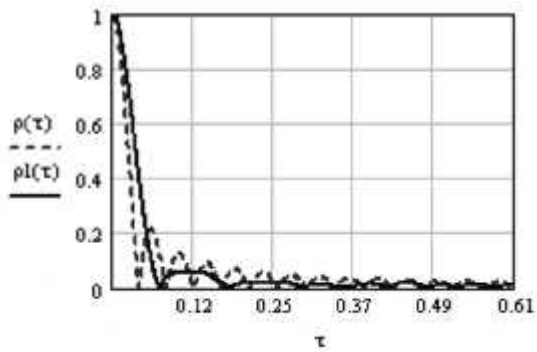
$$\rho(\tau) = \left| \sum_{n=0}^{N-1} \alpha^n \cdot \frac{\sin \left[\pi \cdot \tau \cdot \Delta f \cdot \beta^n \left(\tau_i - \frac{|\tau|}{\tau_i} \right) \right]}{\pi \cdot \tau \cdot \Delta f \cdot \beta^n} \right| \times \sum_{n=0}^{N-1} \alpha^{-n}, \quad |\tau| \leq \tau_i \quad (10)$$

$\Delta f \cdot \beta^{N-1}$,

$$\rho(\tau) = \frac{\left| \sin \left[\pi \cdot \tau \cdot \Delta f \cdot \beta^{N-1} \left(\tau_i - \frac{|\tau|}{\tau_i} \right) \right] \right|}{\pi \cdot \tau \cdot \Delta f \cdot \beta^{N-1}}, \quad |\tau| \leq \tau_i. \quad (11)$$

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$\rho(\tau)$ $\rho_l(\tau)$
 $\tau \geq 0$.



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$\alpha = 1, \beta = 1,25$

$N = 5$

- 0,21.

3.

$\alpha \quad \beta$

N .

α

$F_{max} \cdot k$

$N = 5$.

$N = 5$.

β

α

$F_{max} \cdot k$,

(12)

F_{max} -

; k -

0,5

$\Delta f \cdot \beta^{N-1}$

. 1

α

β ,

$F_{max} \cdot k$,

β ,

$F_{max} \cdot k$.

α

β

1

α	0,1	0,2	0,3	0,4	0,5	0,6	0,7	0,8	0,9	1,0	1,2
β	0,4	0,5	0,6	0,65	0,7	0,75	0,75	0,79	0,81	1,25	1,3
F_{max}	0,14	0,1	0,07	0,053	0,038	0,04	0,045	0,048	0,05	0,06	0,05
k	1,049	1,117	1,148	1,217	1,246	1,283	1,367	1,432	1,512	1,504	1,429
$F_{max} \cdot k$	0,147	0,111	0,08	0,064	0,047	0,051	0,061	0,068	0,075	0,09	0,071

α	1,4	1,6	1,8	2,0	2,2	2,4	2,6	2,8	3,0	3,5	4,0
β	1,35	1,4	1,4	1,45	1,5	1,5	1,55	1,55	1,6	1,7	1,8
F_{max}	0,042	0,035	0,035	0,042	0,05	0,05	0,055	0,06	0,065	0,072	0,082
k	1,398	1,346	1,346	1,287	1,244	1,244	1,179	1,179	1,163	1,153	1,121
$F_{max} \cdot k$	0,058	0,047	0,047	0,054	0,062	0,062	0,064	0,07	0,075	0,083	0,091

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N	2	3	4	5	6	7	8
F_{max}	0,16	0,095	0,045	0,035	0,055	0,075	0,086
k	1,116	1,194	1,273	1,355	1,375	1,4	1,41
$F_{max} \cdot k$	0,178	0,113	0,057	0,047	0,075	0,105	0,121

. 3 F_{max} k $\alpha = 1,6$ N = 5. β α β

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N

β

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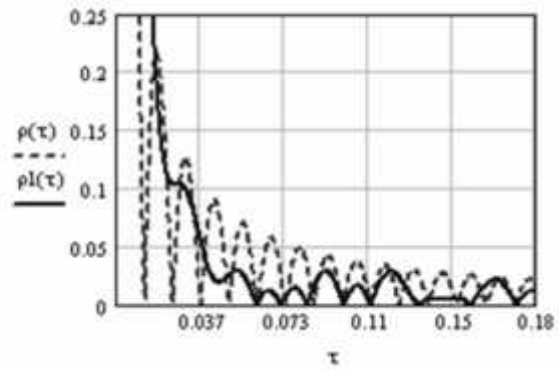
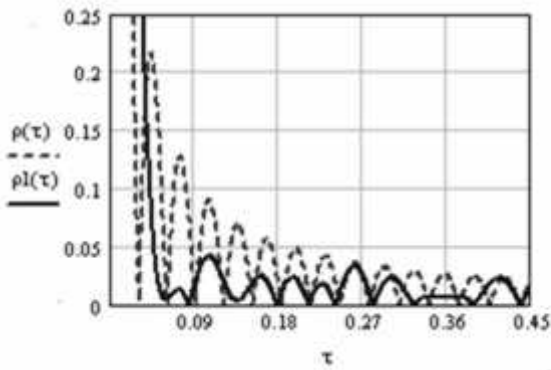
β	1,25	1,3	1,35	1,4	1,45	1,5	1,55
F_{max}	0,09	0,058	0,039	0,035	0,05	0,048	0,048
k	1,2	1,286	1,333	1,355	1,37	1,375	1,429
$F_{max} \cdot k$	0,108	0,074	0,05	0,047	0,068	0,066	0,068

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N = 8.

$\alpha = 1,4; \beta = 1,35; N = 5$

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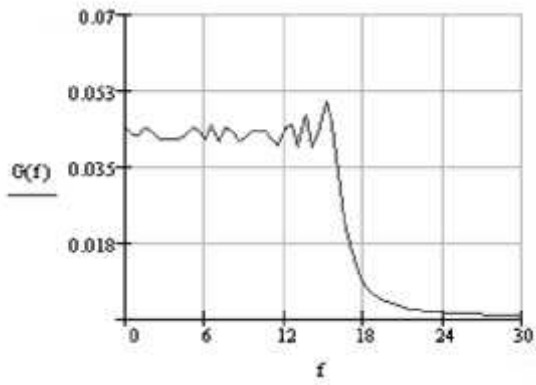
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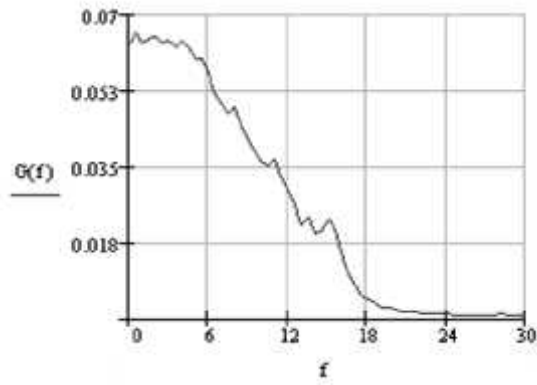
$$\Delta f \cdot \beta^{N-1}$$

[4].

$\alpha = 1,4; \beta = 1,35; N = 5$



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	F_{max}		
-	0,01	1,35	-
, n = 6	0,01	1,41	-1,2
, k = 0,08; n = 2	0,07	1,47	-1,34
, k = 0; n = 2	0,024	1,62	-1,76
, k = 0; n = 3	0,011	1,87	-2,38

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