

$Q(3) = 0.0013$ ,  $Q(3.1) = 9.676E-04$ ,  $Q(3.2) = 6.871E-04$ ,  $Q(3.3) = 4.834E-04$ ,  $Q(3.4) = 3.369E-04$ ,  $Q(3.5) = 2.326E-04$ ,  $Q(3.6) = 1.591E-04$ ,  $Q(3.7) = 1.078E-04$ ,  $Q(3.8) = 7.235E-05$ ,  $Q(3.9) = 4.810E-05$ ,  $Q(4) = 3.167E-05$

$$\mathcal{F}\{\text{rect}(t/T)\} = T \text{sinc}(fT) = T \sin(\pi fT) / \pi fT$$

$$\mathcal{F}\{\text{sinc}(t/T)\} = T \text{rect}(fT)$$

$$\mathcal{F}\{1 - |\tau|/T\} = T \text{sinc}^2(fT)$$

$$\psi_x(f) = |X(f)|^2, G_x(f) = \sum |c_n|^2 \delta(f - nf_o), G_x(f) = \lim_{T \rightarrow \infty} \frac{1}{T} |X_T(f)|^2$$

$$R_x(\tau) = \int_{-\infty}^{\infty} x(t)x(t + \tau)dt, R_x(\tau) = \lim_{T \rightarrow \infty} \frac{1}{T} \int_{-\infty}^{\infty} x(t)x(t + \tau)dt$$

$$c_n = \int_{-\infty}^{\infty} x(t) \exp(-j2\pi n f_o t) dt$$

$$\text{SNR [dB]} = 10 \log(\text{SNR}), \text{SNR}_{q,\text{dB}} = 6.02b + 10.8 + 10 \log(\sigma_x^2 / V_{pp}^2), \text{SNR}_j = 3 / (\sigma_t^2 + f_H^2)$$

$$P_B = Q[(a_1 - a_2) / (2\sigma_0)], P_B = Q[\sqrt{E_d} / (2N_0)]$$