

Relativni ladeci

① $A = 1000$
 $F = 100 \text{ dB}$
 $V = 1 \text{ mV}$

$$U_{\text{rel}} = A \cdot U_{d, \text{rel}} \pm \frac{A}{F} U_{i, \text{rel}}$$
$$= 1000 \cdot 1 \text{ mV} \pm 0,01 \cdot 2 \text{ V}$$
$$= 1 \text{ V} \pm 0,02 \text{ V}$$

$U_{\text{snatche}} = 2 \text{ V}$
 $\text{SNR} = ?$

$U_{d, \text{rel}} = 1 \text{ V}$ $U_{i, \text{rel}} = 0,02$

$$\text{SNR} = \frac{U_{d, \text{rel}}}{U_{i, \text{rel}}} = 50 = 34 \text{ dB}$$

$$1 \text{ V SNR} = 100 \text{ dB} - 66 \text{ dB}$$

② $v = 1 \text{ m/s}$
 $2r = 0,015 \text{ m}$
 $B = 0,03 \text{ T}$
 $U = ?$

$$U = \phi \cdot v \cdot B \cdot \sin(\omega t)$$
$$U = 2r \cdot v \cdot B = 450 \text{ mV}$$

③ $r = 2$
 $B = 1 \text{ T}$

$$r = \frac{1}{B} \sqrt{\frac{2m \cdot U}{q}}$$

$U = 1 \text{ keV}$

$A_r(c) = 12$

$A_r(o) = 16$

$m_e = 9,11 \cdot 10^{-31} \text{ kg}$

$e = 1,6 \cdot 10^{-19}$

$$r = \frac{1}{B} \sqrt{\frac{2[m_e \cdot (2M_o + M_e)]}{q}} \cdot U = 0,0302 \text{ m}$$