



$$I = v_x(t) P(t)$$

$$100 \text{ dB} \quad \frac{I_1}{I_2} = 10^{10}$$

$$0 \text{ dB} \quad \text{rms}(P) = 0.00002 \frac{\text{N}}{\text{m}^2}$$

$$100 \text{ dB} \quad \text{rms}(P) = 2 \frac{\text{N}}{\text{m}^2}$$

$$\text{ms}(P) = [\text{rms}(P)]^2$$

$$v_x(t) = \frac{1}{\rho c} P(t)$$

$$I(t) = P^2(t) \cdot \frac{1}{\rho c}$$

P, v, x linear I, P^2

$$\text{rms}(v_x) = \text{rms}(P) \cdot \frac{1}{\rho c}$$

$$v_x(t) = \frac{2 \text{ K} / (\text{s}^2 \text{ M})}{1.22 \frac{\text{K}}{\text{M}^3} \quad 343 \frac{\text{M}}{\text{s}}}$$

$$N = \frac{\text{K M}}{\text{s}^2}$$

$$\text{Pascal} = \frac{\text{K}}{\text{s}^2 \text{ M}}$$

$$\approx 0.00478 \frac{\text{M}}{\text{s}} = \text{RMS}(v_x)$$

$$I = 0.00478 \cdot 2 \frac{\text{MN}}{\text{s}^2 \text{ M}^2} = 0.00956 \frac{\text{K}}{\text{s}^2}$$