

$$2) dB \quad I = 0.01 \text{ W/m}^2 = 10^{-3} \text{ W/m}^2$$

$$\text{Bel} = \log_{10} \frac{10^{-3} \text{ W/m}^2}{10^{-12} \text{ W/m}^2}$$

$$= \log_{10} \cdot 10^{-3+12} \text{ W/m}^2$$

$$= \log_{10} 10^9 \text{ W/m}^2$$

$$= 9 \text{ Bel} \rightarrow 9 \times 10 = \underline{\underline{90 \text{ dB}}}$$