
Subject: Re: sensitivity: conversion of units
Posted by [GM](#) on Wed, 08 Jun 2005 18:31:18 GMT

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Greetings! I've seen various values used for half space pressure, from 112 -112.2 dB/m, though 112 seems to be the most common. FWIW, I calc'd it at 112.018, so rounding it off to 112 and 1 % eff..... dBv = $\sim 112 + 10 \cdot (\log_{10}(0.01)) = \sim 92$ dB/ ~ 2.828 V/m Since $1 \text{ W} = E^2/R = \sim 2.828^2/8 = 1$, then dBa = ~ 92 dB/W/m for 8 ohm nominal loads. To convert other nominal resistances (R) to dBa, add $10 \cdot \log_{10}(R/8)$ to the dBv, so if the above is a nominal 4 or 16 ohms, then dBa = ~ 89 or 95 dB/W/m. GM
