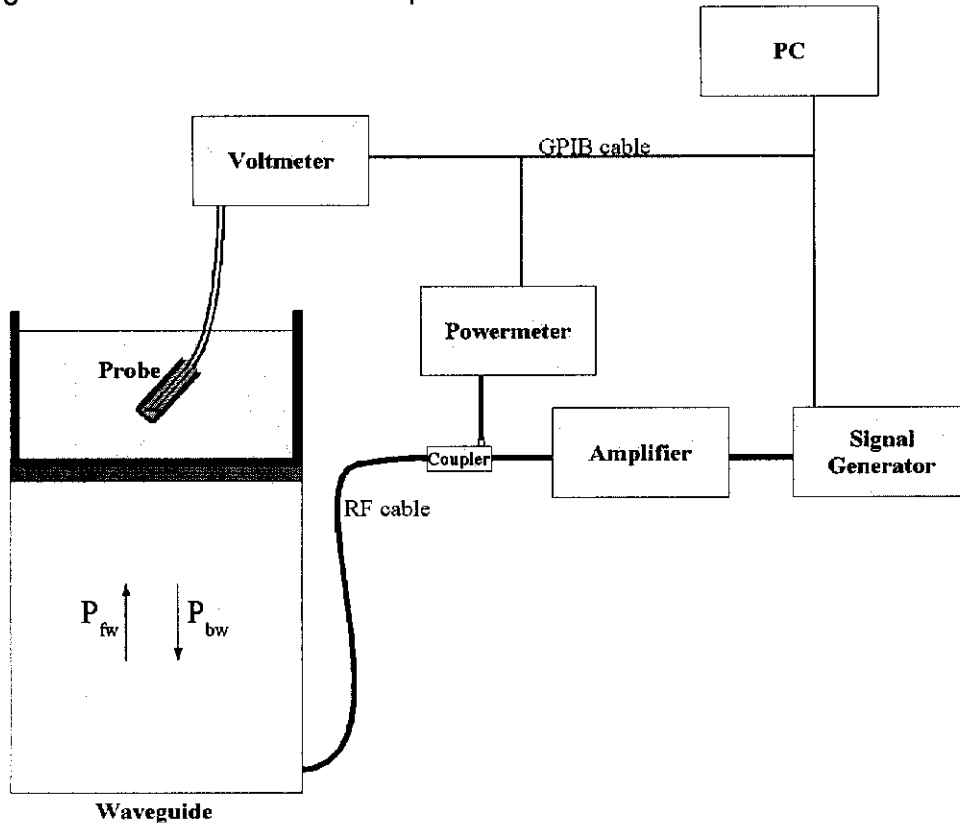


The explanation of the conversion factors

Probe calibration is realized, in compliance with EN 62209-1 and IEEE 1528 std, with CALISAR, Antennessa proprietary calibration system. The calibration is performed with the EN 62209-1 annexe technique using waveguide method at the five frequencies.



$$SAR = \frac{4(P_{fw} - P_{bw})}{ab\delta} \cos^2\left(\pi \frac{y}{a}\right) e^{-(2z/\delta)}$$

Where :

P_{fw} = Forward Power; P_{bw} = Backward Power

a and b = Waveguide dimensions; δ = Skin depth

For the CF factor, the following principle is used:

The calibration factors, $CF_{(N)}$, for the 3 sensors corresponding to dipole 1, dipole 2 and dipole 3 are: $CF_{(N)} = SAR_{(N)} / V_{lin(N)}$ ($N=1,2,3$)

The linearised output voltage $V_{lin(N)}$ is obtained from the Voltage output reading $V_{(N)}$ using: $V_{lin(N)} = V_{(N)} * (1 + V_{(N)} / DCP_{(N)})$ ($N=1,2,3$)

where DCP is the diode compression point in mV.

For the E field, the following principle is used:

$$SAR = CF_{(N)} * V_{lin(N)} = \sigma * E_{(N)}^2 / \rho, \quad (N=1,2,3)$$

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